

# THE *Soybean* *Digest*

During the past few years considerable progress has been made in soybean disease research. Serious threats to the soybean industry have arisen and research workers have met the challenge.—John Dunleavy, Iowa State University.

There is a great future ahead of the soybean industry of the United States if we can prevent outside influences from spoiling that future. I hope to see that billion bushel crop produced and sold into channels of consumption.—Geo. M. Strayer, executive vice president, American Soybean Association.

I will . . . emphasize the need for continuous lecturing and preaching until all Japan becomes aware of the value of soybeans and their products. Going out in the field to promote is more effective than broadcasting by sitting in the office.  
—Shizuka Hayashi, Japanese American Soybean Institute.

## 41<sup>ST</sup> ANNUAL CONVENTION ISSUE

September 1961 • Vol. 21, No. 11

We are in no position to absorb overproduction problems of surplus commodities faster than we can build markets for our soybean crop.—Chas. V. Simpson, president, American Soybean Association.

The world is asking today just how far soybean products can go to solve the problems of hunger and malnutrition on every continent of the globe. The answer, properly told, represents a big challenge.—Howard L. Roach, president, Soybean Council of America, Inc.

These six East Coast States have a definite potential for 2½ to 3 million or more total acres of soybeans. Whether this increase materializes will depend on the effect of governmental programs and the needs for soybeans reflected at the market place.—George E. Spain, North Carolina State College.

Increased price supports and involvement in surplus-disposal programs are rapidly drawing soybeans into the sphere of governmental domination . . . This industry would not have grown and prospered as it has, had it taken the governmental route when it was first threatened with a surplus.—T. A. Hieronymus, University of Illinois.

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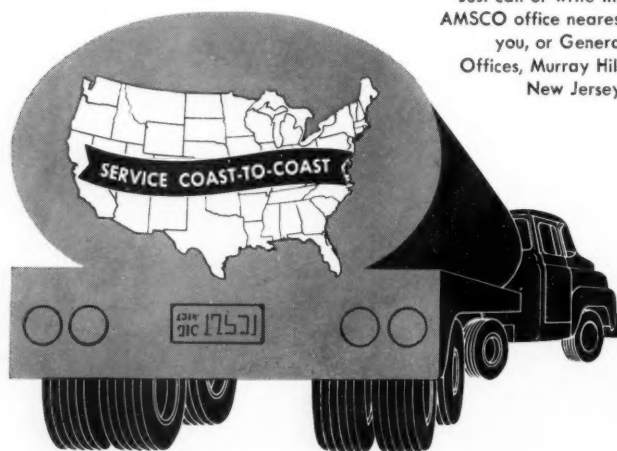
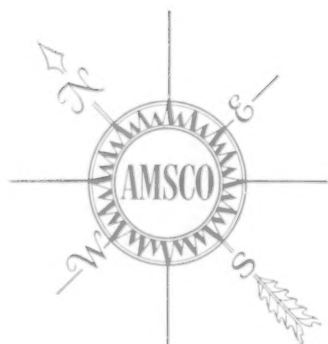
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# THE Soybean Digest

REG. U. S. PAT. OFF.

Official Publication of American Soybean Association and  
Soybean Council of America, Inc.

HUDSON, IOWA

Vol. 21 September, 1961 No. 11

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SEPTEMBER, 1961

## THE SOYBEAN DIGEST

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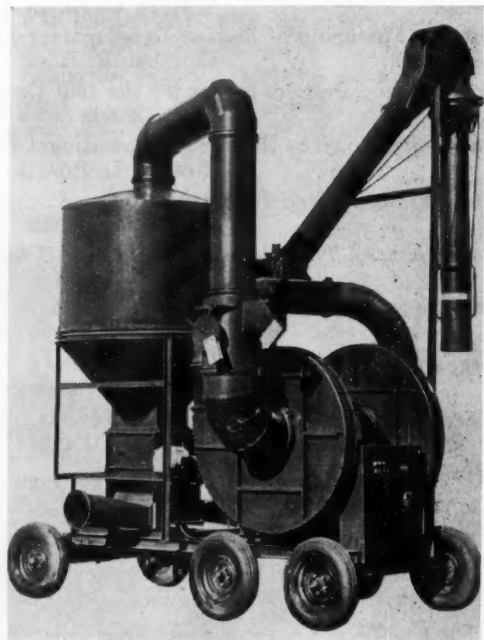
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the collection and dissemination of the  
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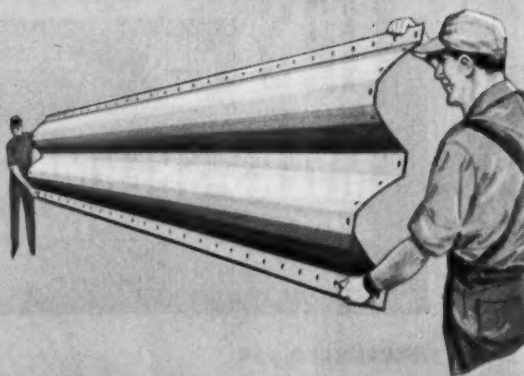
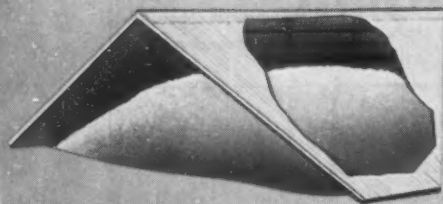
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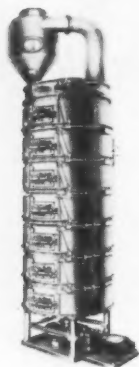
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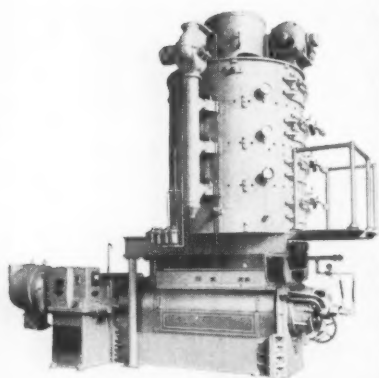
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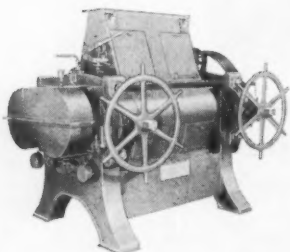
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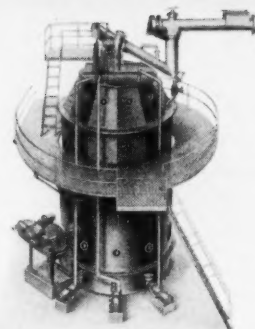


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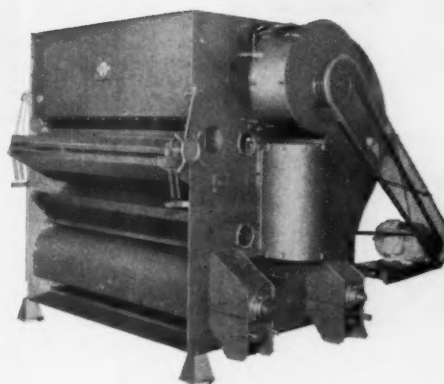
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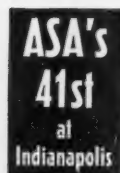
## HONORARY LIFE MEMBERS—1961



### *Shizuka Hayashi*

Mr. Hayashi was born in Hawaii. He graduated from Japan Business College and Heald's Business College S.F.

Mr. Hayashi has devoted most of his life to the fats and oils business. From 1923 to 1940 he was manager of the import and export division of Nisshin Oil Mills, Ltd., of Tokyo, Japan, and Dairen, Manchuria, one of the largest processors of soybeans and other oil-bearing seeds. When in 1940 the trade division of Nisshin was absorbed by Okura Trading Co., Mr. Hayashi was appointed manager of Okura's Dairen office.



In 1942, Mr. Hayashi went to Singapore and Penang, representing both Okura and Dunlop Rubber Co. After the fall of Singapore he was adviser to the Manchurian government until the end of World War II. In 1948 he made a trip to the United States to study postwar conditions and renew business acquaintances. On his return home he started his own import and export business.

When the Japanese American Soybean Institute was formed in 1956 as the operating agency for the soybean export program of the American Soybean Association and the U. S. Department of Agriculture, Mr. Hayashi became its managing director. Through the Institute the soybean industries of Japan and the United States and the governments of the two countries have learned to cooperate in using U. S. soybeans to provide a better diet for the Japanese people.

### *Albert Henry Probst*

Dr. Albert H. Probst has served the soybean industry well over a period of 25 years.

He received his B. S., his M. S., and his Ph. D. degrees from Purdue University in 1936, 1938, and 1948. He was appointed agent on soybean investigations for the U. S. Department of Agriculture in May 1936 and has continued in that line of work since that date. As research agronomist for USDA and associate professor at Purdue University, he is in charge of soybean breeding in Indiana.

Dr. Probst has contributed greatly to the efficiency of soybean production in Indiana and neighboring states through his research in cultural practices and the development of superior soybean varieties. He has assisted in the development of almost 20 new varieties of soybeans among which are our most popular varieties in production in the Midwest. These new varieties are outstanding for yield, standability, high quality, high oil content, and in many cases with high resistance to soybean diseases. He played a leading role in the development of the Gibson, Patoka, Earlyana, Wabash, and Perry varieties, and had major responsibility for Lindarin and Kent.

Al Probst's great success as a researcher stems from his great enthusiasm, tempered by the fact that he is a keen observer, a most conscientious and persistent worker.

He is author or co-author of over 70 technical and popular publications on soybean research and production.





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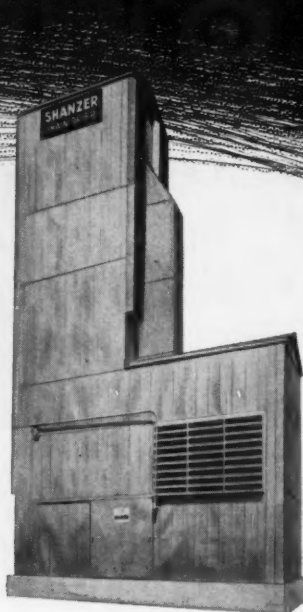
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## THE NEWS IN BRIEF

### THE CROP, MARKETS AND OTHER ITEMS OF NOTE

#### World Production Fats, Oils up

Fats, oils, and oilseeds, fat or oil equivalent, again are moving at high levels in world trade, though possibly slightly below their 1960 record volume, according to USDA's Foreign Agricultural Service. Total exports in 1961 are forecast at 8.8 million short tons, only 1% less than last year's exports.

World production of fats, oils and oilseeds in 1961 is forecast at an all-time high of 31.9 million tons, fractionally above 1960. **By far the most significant expansion tonnagewise will be in edible oils, says FAS.**

The United States again, as in the last 2 years, will supply almost one-third of the world's trade in fats and oils, in contrast to an average of about one-fifth during 1950-54.

Edible vegetable oil exports may be about 50,000 tons less than last year, mainly because of the substantial cutback in soybean and oil exports. U. S. exports probably will be slightly larger, but exports from Mainland China will be down sharply from the postwar peak of 1959 and the reduced level of 1960. China reportedly will make no deliveries of soybeans or vegetable oils to the USSR this year and is marketing only relatively small quantities in Europe.

Cottonseed and cottonseed oil exports should not vary greatly from the 1960 level. U. S. shipments of cottonseed oil in the first half of the year were down about one-fifth from a year earlier, but exports will probably pick up later in the year when new-crop oil becomes available.

#### USDA Views Fats, Oils Outlook

The export outlook for food fats and oils in the 1961-62 marketing year looks bright because sales for dollars plus a large movement of edible oils under all government programs are expected to result in a peak outward movement, according to USDA's Economic Research Service. **Soybean exports are expected to set a new record in the next marketing year — up one-fourth or to 170 million bushels from the 135 million USDA now expects for 1960-61.**

USDA looks for an end-of-year carryover next Sept. 30, 1962, up sharply from the 5 million bushels estimated for this Oct. 1, but **below the record 62 million bushels of Oct. 1, 1959.**

Crushings during August-September are expected to be slightly lower than 59 million bushels in the same 2 months last year, making the season's total about 405 million bushels compared with 393 million bushels last year. USDA says the strong demand for food fats and oils is expected to continue into the 1961-62 marketing year. Bean oil prices during the next few months probably will be relatively firm around the mid-August level of 11c per pound, averaging well above a year earlier.

With the record 1961 soybean crop and crushings in prospect, **soybean meal prices are expected to decline seasonally this fall.**

Farmers are expected to participate considerably more in the CCC price support program than they did last year, and prices to producers during most of the heavy harvesting season this fall probably will average at about the national support rate of \$2.30 per bushel.

Combined exports of soybean and cottonseed oils in 1960-61 may total about 1.2 billion pounds compared with the record 1.459 billion last year, according to USDA. The actual level of exports will depend on the timing of the movement of oil to Spain, the big taker of soybean oil at this time. Any oil not shipped this year will likely be picked up in October-December and this will boost the 1961-62 marketing year total, says USDA. (For further comments on the soybean and fats and oils outlook see George



Peter's column on page 90, and the speech by T. A. Hieronymus beginning on page 55.)

**Some  
Deterioration  
In Crop**

Hot, dry weather the last few days of August and the first days of September pushed the prospective soybean harvest date ahead and probably reduced yield outlook in parts of northern Illinois as it came at the critical podding time. Robert Judd of the National Soybean Crop Improvement Council says the Champaign-Urbana, Ill. area was hurt some. Nebraska crop reporting service states soybeans are hurt in that state.

Soybeans were practically all showing pods in Illinois and Iowa, which was ahead of last year, and there was some yellowing of soybean plants by the last of August in western Iowa, Nebraska, South Dakota and southwestern Minnesota, as well as in parts of Illinois. But the crop was behind normal maturity in Arkansas, Missouri, parts of Minnesota and Ohio. And in these areas there was plenty of moisture for a big crop.

Francis I. duPont & Co. reported some soybeans were combined the last of August in a sandy area around Valmeyer, Ill., but there was no prospect for a substantial run of beans before the latter part of September.

**French  
Team in  
Tour of U. S.**

A French team of five livestock feeding experts began a 2-week tour of the U. S. soybean industry by attending the American Soybean Association convention at Indianapolis. Their itinerary includes Purdue University, Chicago, Minneapolis, Iowa State University, St. Louis, Washington, D. C., and Raleigh, N. C., as well as the Waterloo, Iowa, office of the Soybean Council of America which sponsored the tour.

The Soybean Council was represented with a stand at the 5th Alexandria (Egypt) Industrial and Commercial Fair in August. The exhibit stressed soybeans, soybean oil and finished edible products. Sizable quantities of literature were distributed daily to the many visitors who flocked to the beautiful summer resort known as the "Pearl of the Mediterranean" at Alexandria. Alexandria has the oldest existing harbor in the world and handles over 50% of Egypt's maritime trade.

A recent decision of the Spanish government to speed the breaking up of large land holdings in that country will have a detrimental effect on olive production there since most of the large holdings are in the olive belt, according to our reports.

**Jimson  
Weed Not  
Harmful?**

Presence of jimson weed in varying amounts in soybean meal is not harmful to poultry, tests run at German experiment stations at the request of the German Oil Millers Association would indicate. Jimson weed did not appear to injure the health of laying hens and egg production was not reduced. And there was no damage to health of 3-week-old broiler chicks and feed consumption was not influenced.

The Spencer Kellogg division of Textron, Inc., has announced it will offer for sale its soybean processing business and concentrate on marketing existing and improved lines of linseed oil and chemical products for the protective coating and industrial chemical industries. The company said it would sell its soybean plants at Des Moines, Iowa, Decatur, Ill., and Bellevue, Ohio as "going business." A Textron spokesman said soybean crushing is a substantial portion of Spencer Kellogg's business, but is the least profitable portion. Spencer Kellogg was acquired by Textron July 28.

Dwayne O. Andreas, assistant general manager of Farmers Union Grain Terminal Association, Minneapolis, has been named to President Kennedy's Food for Peace Council, which will work closely with Food for Peace Administrator George McGovern.

R. A. Fisher, Gibbs & Harris Rice Drier, Wynne, Ark., reports no stinkbugs have been noticed in rice fields where they usually feed before moving into soybeans.



**The phone call heard round the world.**

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**CARGILL** *EXTENDING THE REACH OF  
THE AMERICAN FARMER*





At the annual banquet head table: Chester B. Biddle, chairman of the convention committee; Donald B. Walker, chairman of the board, National Soybean Processors Association; Mrs. Hubert H. Baker; Robert C. Tetro, administrator, Foreign Agricultural Service; Mrs. Geo. M. Strayer; D. F. Berkley, Indiana University, the banquet speaker; Charles V. Simpson, ASA president; Mrs.

Howard L. Roach; Howard L. Roach, president, Soybean Council of America; Mrs. Charles V. Simpson; H. H. Baker, vice president ASA; Mrs. Biddle; R. G. Houghtlin, president, National Soybean Processors Association; and Geo. M. Strayer, ASA executive vice president.

## Sullivan Is Vice President; Trisler, Gildersleeve Directors

President Charles V. Simpson and Executive Vice President and Secretary-Treasurer Geo. M. Strayer at the annual business meeting.



CHARLES V. SIMPSON, Waterville, Minn., was reelected president of the American Soybean Association at the close of the 41st annual convention at Indianapolis, Ind., Aug. 29.

Hays Sullivan, Burdette, Ark., was elected vice president, succeeding Hubert H. Baker, Dalton City, Ill. Geo. M. Strayer, Hudson, Iowa, was reelected executive vice president.

New directors elected from Illinois were Lyle Trisler, Fairmont; and Ben Gildersleeve, Hudson. They succeed Baker and Carle G. Simcox, Assumption, on the board of directors. Harris Barnes, Jr., Clarksdale, Miss., was elected a director to fill the unex-

**ASA's  
41st  
at  
Indianapolis**

pired term of the late Walter Scott, Jr., Tallulah, La.

The following men were reelected to the board of directors: Simpson; Chester B. Biddle, Remington, Ind.; John W. Evans, Montevideo, Minn.; Harry Gatton, Jr., Rumsey, Ky.; Jake Hartz, Jr., Stuttgart, Ark.; Glen Myers, Memphis, Mo.; and John Sawyer, London, Ohio.

Holdover directors are: O. H. Acorn, Wardwell, Mo.; John Butterfield, Pana, Ill.; Joe W. Hammer, Des Moines, Iowa; Howard Roach, Plainfield, Iowa; Richard Smith, Tilbury, Ontario; Strayer; Sullivan; Ersel Walley, Fort Wayne, Ind.; and David G. Wing, Mechanicsburg, Ohio.

A group composed of members of the Indiana Farmers Union led by their president, John Raber, tried to "infiltrate" the annual business meet-

Vice President H. H. Baker presents honorary life membership award to A. H. Probst at left, and Shizuka Hayashi at right. Chester B. Biddle, Remington, Ind., escorted Dr. Probst; Ersel Walley, Fort Wayne, Ind., escorted Mr. Hayashi.





Aeroglide Corp. held a regional sales meeting just preceding the convention. Here are men who attended.



Mr. and Mrs. Jake Hartz, Jr., Stuttgart, Ark.; Hideo Ote, Nikka Oils and Fats Co., Tokyo, Japan; and Hiromasa Tago, Mitsui & Co., Chicago.



Gus Critz, Osceola, Ark.; John Gray, Baton Rouge, La.; and David G. Wing, Mechanicsburg, Ohio.

ASA business manager, George McCulley, and V. H. Hougen, Foreign Agricultural Service.



Agronomists: E. E. Hartwig, John Dunleavy, Herbert W. Johnson, J. C. Hackleman, J. W. Lambert; and the Soybean Council's J. W. Hayward.

ASA's Geo. M. Strayer and William Such, R. J. Brown Co., St. Louis.



Dr. and Mrs. J. H. Lambert, University of Minnesota.



F. J. Verneti, soybean breeder at Instituto Agronomico do Sul, Brazil, and A. H. Probst, Purdue University agronomist. Mr. Verneti is a Rockefeller scholar studying for a masters degree under Dr. Probst.



Ballad singer Sheila Johnson at the banquet. Another singer was Jerry Lintner. Both are Purdue University students.



Parke Thomas, Aeroglide, (center), with K. A. Standing and A. E. Jolley, Chatham, Ontario.



ASA director John Butterfield, Pana, Ill., and U. of Ill. economist T. A. Hieronymus.

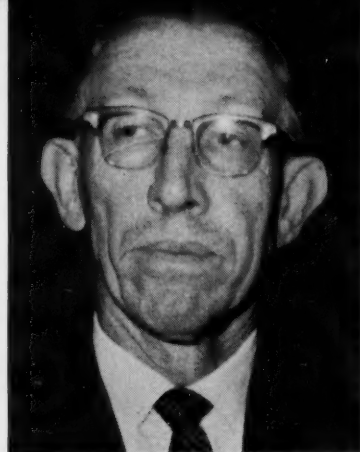
At the ladies coffee hour: Mrs. Chester B. Biddle, Suzanne Biddle, Mrs. Ward Calland and Mrs. John Gray.





# The Exhibit Booths

—Convention photos by Kent Pellett, Dave Bramson, and Bob Smythe.



Hays Sullivan, Burdette, Ark., was elected ASA vice president.



ing Aug. 29 after applying for membership the previous day.

The group was ruled out of order by President Simpson since their memberships had not yet been processed in the home office. They were not allowed to vote though several members of the group were permitted to make statements.

A restraining order obtained by Raber in Marion County superior court ordering all business of the Association halted was denied in court the next day as asked by ASA officials on the ground that the business meeting had been concluded before the order was obtained. At the close of the hearing Judge John F. Linder soundly spanked the group for what he called their trojan horse tactics and gave them a lecture on Americanism.

Between 300 and 400 members attended from 25 states and Canada, Japan, Brazil, Spain and France.

**EXHIBITORS** and their visitors at the convention booths. Pictures at left (read from top to bottom and left to right): Myers-Sherman Co.; O. C. Price, Buffalo, Ind.; Tom Ritchie, Hemlock, Ind.; Fred Rieuf and Dale Griffin, Streator, Ill.; Columbian Steel Tank Co.; Dave Hanley, Soybean Digest, Chicago; Dick Parsons, Kansas City, Mo., and Dave Bramson, Soybean Digest, Hudson, Iowa; Urbana Laboratories; L. E. Manning, Urbana, Ill.; A. T. Ferrell & Co.; A. A. Fretwell, Spartan Grain & Milling Co., Spartanburg, S. C., and Floyd Sovey, Saginaw, Mich.; Burrows Equipment Co.; Charles Polstra, Chicago; Soybean Digest; Dave Hanley, Chicago; Dave Bramson and Geo. M. Strayer, Hudson, Iowa, and Art Hutchison, Chicago.

Pictures at right: Kennedy Car Liner & Bag Co., Inc.; H. G. McKee and G. O. Lorenz, Shelbyville, Ind.; Prater Pulverizer Co.; J. C. Lundmark, V. D. Anderson Co., Birmingham, Ala.; P. E. McKamy, Chicago, and Marshall Carpenter, Hegman, Inc., Minneapolis, Minn.; Simon-Carter Co.; Bernie Turner, Nashville, Tenn., and George Durkot, Minneapolis, Minn.; Seedburo Equipment Co.; Jim Young, Arkansas grower, Crawfordsville, Ark., and Rex Yokum, Chicago; Davenport Machine & Foundry Co.; L. W. Follett and Harry Carlson, Davenport, Iowa; Agricultural Alumni Seed Improvement Association; Charles V. Simpson, Waterville, Minn.; L. C. Mead, Lafayette, Ind., and Lee Patrick, Indiana Grain Cooperative, Indianapolis.

**SOYBEAN DIGEST**

Dean F. Berkley, director of field services and professor of school administration at Indiana University, Bloomington, Ind., was a highly entertaining banquet speaker.

Musical entertainment was furnished by vocalists Jerry Lintner and Sheila Johnson, Purdue University students.

The banquet entertainment and speaker were sponsored by the Indiana Farm Bureau, Inc., and the grain division of the Indiana Farm Bureau Cooperative Association, Inc.



Here's how they relaxed.

## Sullivan, Andreas to Council Board

ALL OFFICERS of the Soybean Council of America, Inc., were re-elected at the annual business meeting at Indianapolis the morning of Aug. 30.

They are:

Howard L. Roach, Waterloo, Iowa, president.

David G. Wing, Mechanicsburg, Ohio, vice president.

R. G. Houghtlin, Chicago, Ill., secretary.

Chester B. Biddle, Remington, Ind., treasurer.

Geo. M. Strayer, Hudson, Iowa, executive director.

Hays Sullivan, Burdette, Ark., was named by the American Soybean Association to the Council board of directors, succeeding H. H. Baker, Dalton City, Ill.

Other producer members on the board who were reappointed by ASA are: John W. Evans, Montevideo, Minn.; Jake Hartz, Jr., Stuttgart, Ark.; John Sawyer, London, Ohio; Charles V. Simpson, Waterville, Minn.; Roach; Wing; Biddle; and Strayer.

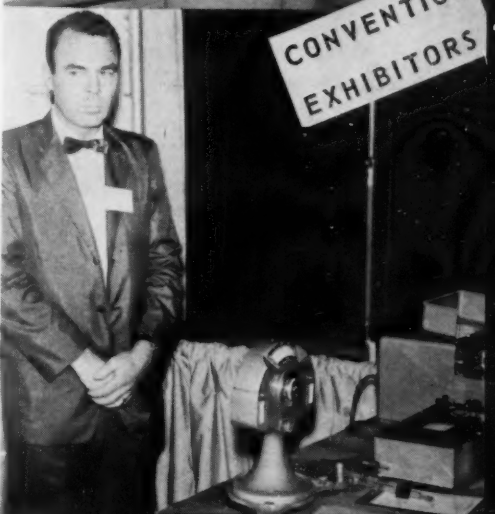
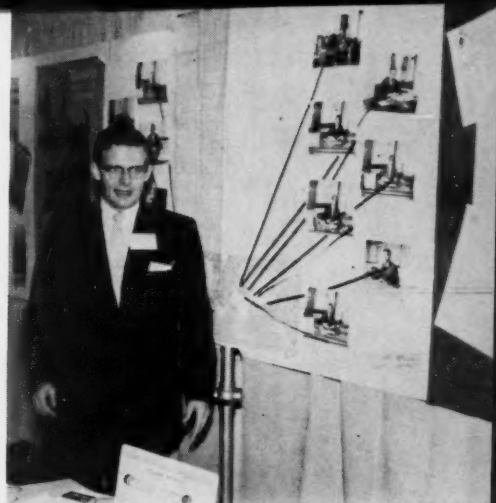
National Soybean Processors Association appointed Lowell Andreas, Honeyamead Products Co., Mankato, Minn., to the Soybean Council board,

replacing Dwayne Andreas, Farmers Union Grain Terminal Association, St. Paul, Minn.

NSPA members reappointed to the Council board: Scott Cramer, Swift & Co., Chicago; Ralph G. Golseth, Lauhoff Soya Co., Danville, Ill.; W. E. Huge, Central Soya Co., Fort Wayne, Ind.; R. B. Jude, Spencer Kellogg & Sons, Inc., Buffalo, N. Y.; M. D. McVay, Cargill, Inc., Minneapolis, Minn.; Glenn Pogeler, North Iowa Cooperative Processing Association, Mason City; William King Self, Riverside Oil Mill, Marks, Miss.; and Donald B. Walker, Ralston Purina Co., St. Louis, Mo.

The Council board approved the appointment of Raymond J. Barnes, North American Grain Export Association, and Fred J. Maywald, Farmers Grain Dealers Association of Iowa, Des Moines, to the board subject to their acceptance.

**EXHIBITORS** and visitors at the convention booths (left to right and top to bottom): Soybean Council of America, Inc.: R. W. Fischer, Waterloo, Iowa; Huntley Manufacturing Co.: Lester Johnson, Brocton, N. Y.; Hegman, Inc.: Marshall Carpenter, Minneapolis, Minn.; Corn States Hybrid Service: Bob Anderson and Herb Dalglish, Des Moines, Iowa; and Otto B. Langfelder, Illinois Soy Products, Springfield, Ill.



Ladies coffee hour: Mrs. Jake Hartz, Jr., Stuttgart, Ark.; Mrs. O. H. Acom, Wardell, Mo.; Mrs. David G. Wing, Mechanicsburg, Ohio; Mrs. Geo. M. Strayer, Hudson, Iowa; and Mrs. G. Arnaud, Paris, France.



Most sessions were well attended.

## RESOLUTIONS

**WE** EXTEND our appreciation to all committees who have worked planning this convention which has led to its success, to the Claypool Hotel, the Indiana Farm Bureau Cooperative, Inc., the Indiana Farm Bureau, Inc., and the city of Indianapolis for the hospitality extended.

### Trade Relations

1—We wish to thank the Secretary of Agriculture for the implementation of the use of fats and oils in the overseas church and charity relief feeding program. We feel this will acquaint peoples of other nations with U. S. vegetable oils and their use.

2—We wish to commend the Department of Agriculture, especially the Foreign Agricultural Service, and the soybean industry for their cooperation and untiring efforts in the sales and trade promotional programs for soybeans and soybean products, and urge their continued efforts on these programs.

3—We urge officials of government to announce any programs affecting the markets for soybeans and soybean products during this coming year prior to harvest of these crops, and in such a manner that they will be of greatest benefit to the producer.

4—We urge the marketing of cleaner soybeans to protect our established markets, domestic and foreign. We recognize the seriousness of *crotalaria* seed in soybeans and ask state agencies in areas where this seed is grown to encourage a program of eradication by

placing *crotalaria* on the list of prohibited seeds. We also encourage farmers to establish a program of eradication of all weeds and other foreign materials in soybeans to market a cleaner product.

5—We ask that proper USDA officials investigate the damage to whole soybeans caused by stinkbugs and the results of the investigation be made known to the trade.

### Research

Acres yields of soybeans are at a relative standstill with no decided increase in yields from present known cultural practices. To improve our acre yields, we ask that state agricultural colleges and the USDA Agricultural Research Service cooperate in breeding and cultural programs designed to develop practices that will result in higher yields and lower production cost. Included should be programs of cooperation with private industry in developing and testing herbicides adapted for use on soybeans.

### Finance

Appreciating the financial contribution being made by the government and business groups for the soybean sales promotional program, we recommend that members of our Association should make a study of farmer participation in this financing. —*Jake Hartz, Jr., chairman, Chester B. Biddle, Richard Smith, Joe W. Hammer, Ersel Walley, John Butterfield, David Wing, O. H. Acom, C. G. Simcox, and John Evans.*



RESOLUTIONS proposed by the resolutions committee are read by Chester B. Biddle, a member of the committee.

**EXHIBITORS** and visitors at the convention booths (read from left to right and top to bottom): Aeroglride Corp.: Jim Kelly, Raleigh, N. C., and Art Hutchison, Soybean Digest, Chicago; Merrill Lynch, Pierce, Fenner & Smith, Inc.: Herb Price, James Richardson & Sons, Chatham, Ontario, and Robert Suchoff, Commodity News Services, New York; V. D. Anderson Co.: J. C. Lundmark, Birmingham, Ala., and P. E. McKamy, Prater Pulverizer Co., Chicago; Buhler Corp.: Mark Rutimeyer and Willi Zogg, Minneapolis.



## Benzene Content

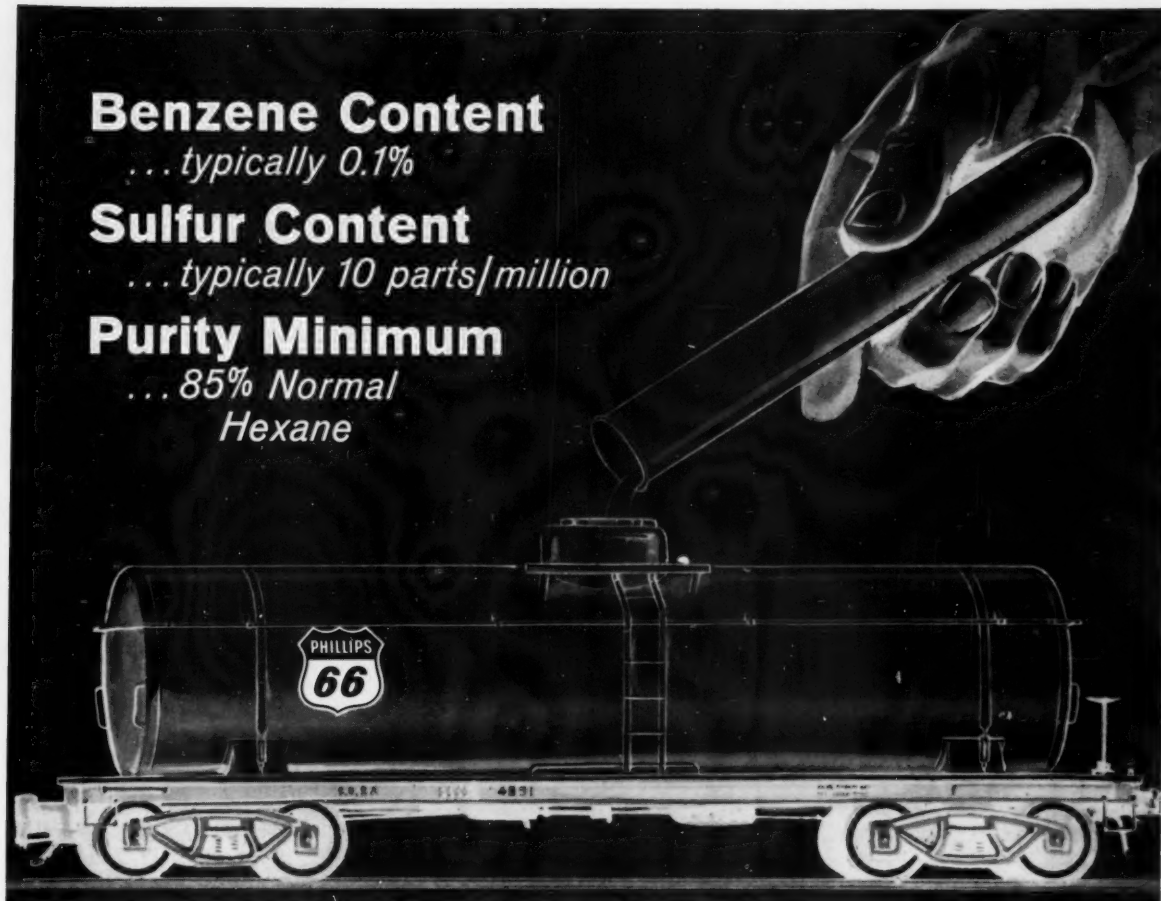
... typically 0.1%

## Sulfur Content

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## Purity Minimum

... 85% Normal  
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Report of the President . . . . . Charles V. Simpson

## Must Avoid Expanding Faster Than We Can Build Markets

**T**HE ANNUAL meeting of our Association affords us an opportunity to reflect on factors during the past year that have a bearing on the crop that we represent, while, at the same time, we transact our regular annual business affairs and lay plans for the year that is just ahead of us.

The 1960 soybean crop has made and continues to make interesting history marketwise. We have seen country soybean markets this past

**ASA's  
41st  
at  
Indianapolis** year ranging from less than the \$2-per-bushel figure to well over the \$3-per-bushel price in the 7-month period following harvest. Me-thinks that probably more people that knew soybeans only as a commodity on the grain markets of the world traded in them with great vigor on the futures market this past winter and spring. Whether this wide market fluctuation was good for soybeans as a crop is questionable.

If this interest by the general public is any indication, then surely our crop is a major commodity at the present time. This, I am certain, we hope our rapidly increasing crop can take in stride. Many and varied are the factors that establish our markets and we are pleased to see now a sort of happy medium reached between the high and low of the past year. This also seems to be true of products made from our crop.

All forecasts indicate a 1961 soybean crop, domestically, that will be a real record breaker, both yield and acreage-wise. After driving through the great soybean producing areas of Minnesota, Iowa, Illinois, Indiana and other high producing states, I can quite agree. After we study the crop reports we begin to realize the magnitude of the task facing the entire soybean segment of agriculture if we are to continue to find expanding markets, and continue we

must, to take care of the greatly expanding soybean crops.

We, quite possibly, will end up the 1961 season with an increase in production over 1960, greater than any of our annual crops prior to 1942. This means that, in order to protect the future of our crop, we *must* have continued expanded cooperation of government, industry and producers, in a united effort to find new uses and further develop existing markets in all corners of the world for soybeans and soybean products.

### 700-Million-Bu. Crop

What about this estimated near 700-million-bushel soybean crop? What factors must be considered? Here are a few that we must weigh: How much will the producers use the government support price program through loans in the months ahead? What about the world tensions? Will they continue or increase? What about stimulated production of competing oil and protein bearing crops both domestic and worldwide? What about legislative programs both at home and abroad? These are but a few of the factors that influence the growth and well-being of our crop.

Representatives of your Association have traveled widely, both here at home and over the rest of the world, this past year in endeavors to increase markets for our soybeans, while, at the same time, helping to hold established markets both at home and abroad. To help improve these markets, the American Soybean Association has continued to cooperate with and be very active in the Soybean Council of America. Through the efforts of these two organizations, great strides in the marketing of soybeans and soybean products have been made. Our continued support of the Soybean Council is very essential and I am sure it is our hope that this joint venture

between soybean industry and soybean producers continues.

Our relations with individuals and groups in the USDA have continued to be good during the past year. Through a period of many years, and many administrations in the Department of Agriculture, our Association has worked very closely with personnel in charge of programs affecting soybeans. We must continue, in every way possible, to assist in the development of programs affecting the production and expansion of our commodity, both here at home and abroad. We have held meetings with our legislative friends, both on state and national levels. Members of Congress and state legislators have been very cooperative in helping to solve many of the legislative problems in relation to our crop.

During the past year we have worked closely with members of other commodity groups at meetings and in joint endeavors to solve many of our common problems. We must realize that many of the solutions to problems that we in agriculture seek cannot be realized overnight. However, as representatives of the various commodity groups learn more of the problems confronting those of crops other than their own, we make progress toward our own goals.

Your representatives have made efforts to prevent overexpansion of our crop domestically. An orderly growth of our soybean crop is to be desired but a sudden shift from surplus crops to soybeans has never been the answer nor is it the answer at the present time. As has been true in the past, we presently are in no position to absorb overproduction problems of surplus commodities faster than we can build markets for our soybean crop. We hope that our intentions are clearly understood.

Our soybean crop continues to

grow in agricultural economic importance and the 1961 crop, like many of recent times, will set all-time production records. At the same time we are setting new production records, I am happy to report to you that our membership is also at its highest peak in the history of our Association. Since Aug. 1, 1959, we have had a 30% increase in membership. This more than keeps pace with our percentagewise production gain in the United States and is a fact that we are very happy about. We would like to see this increase continue and offer our thanks to all responsible for the drives and efforts in this regard.

Our office force at Hudson, Iowa, has been very cooperative during the past year. They certainly labored very diligently to see that latest news of our crop and industry have been sent out monthly through the Soybean Digest, through the Late News, and annually through the Soybean Blue Book. We have a fine staff at Hudson. While not large in number they certainly measure up in capabilities and devotion to duty. We all owe them a pat on the back for a job well done. One has only to spend a day in the office at Hudson to realize that each is a specialist and that, together, they make a fine team. I, for my part, am very proud of them.

#### Much to Be Done

When one reaches a summation point, one is brought up short with the realization that there is still much to be done. We soybean people have bought our world markets by competitive soybeans, pricewise, or soybean products; through hard work; by selling wisely; and by solving, virtually, a mountain of problems. Now is no time to rest on the deeds of the past.

Further markets need to be developed. More work must be done through research for production and utilization. Better and more handling facilities are needed. And there are just a lot of major problems still to be solved. Probably the one thing that stands out is the need to be ever vigilant and not expand production faster than we can build markets for the crop. All this points to the fact that, more and more as time goes on, every soybean grower needs to be a part of the American Soybean Association so that, collectively, we can hope to accomplish all these and other important things that relate to the crop that we represent.

Let us not allow ourselves to be

priced out of position in these same world markets by those who mean well but fail to realize that we only wish to use support prices as a means to help bring the soybean crop that we represent to market in an orderly manner.

I should like to take this opportunity, on behalf of the American Soybean Association, to thank all who have given generously of their time and talents during the past year in furthering and protecting our segment of American agriculture. I feel that we must pledge

every effort within our power to assist in carrying out all programs which are developed to assist soybean production individually, agriculture collectively, our great nation, and the entire world, to improve the lot of all mankind regardless of race, color, or creed. Hungry people make for a discontented nation and certainly we have a commodity that can do more than any other to relieve hunger, balance diets, and make for a better world. —Chas. V. Simpson, president, American Soybean Association.



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**CLIMATE CONTROLLED DRYING**





Report of the Executive Vice President  
and Secretary-Treasurer . . . . . Geo. M. Strayer

## Concerted Effort on the Part of All Is Needed

**T**HIS OCCASION marks a milestone in my relationships with the American Soybean Association in that it is my 21st report to you as both an elected and an employed secretary of your organization and it marks the start of my third decade of service to ASA. During the period of time I have served you, the soy-



bean crop in the United States has increased from the 78 million bushels of 1940 to the contemplated 700 million bushels of 1961. From the position of the world's largest net importer of fats and oils we have reversed ourselves to the point of being the world's largest net exporter of fats and oils and oil-bearing materials—chiefly because of our soybean production increase.

During this period of time I have seen the monthly average price of soybeans, as paid to farmers, vary from a low of 67¢ per bushel to a high of \$4 per bushel. During the same period of time I have seen soybean oil sell as low as 3.9¢ per pound at midwestern points and as high as 33.6¢ per pound, while meal has sold as low as \$25 per ton and as high as \$117.20 per ton average price per month, basis Chicago.

Through this period of years since World War II, as the major expansion in soybean production has taken place, it has been the established policy of this Association to keep support prices on soybeans at levels where we could have an opportunity to determine who our potential customers might be, how much of our products they could use, and at what prices they would buy. We have had support prices on soybeans as low as \$1.05 per bushel and as high as \$2.56 per bushel since supports were instituted in 1941. The general trend since 1953 has been to reduce support prices gradually as the market potentials have developed and to rely on the selling price rather than

the support. However, this year we were given a 25% increase in the support price over that of the previous year.

At least partially because of this higher support price we are faced with the largest soybean crop in history—the Aug. 1 USDA crop forecast predicted a crop of 683 million bushels, which is approximately 25% greater than last year's crop. Fortunately we will have practically no carryover at the end of the current crop year.

### Market Outlook

However, after having talked with buyers in Japan and in the European countries within recent months I am gravely concerned about our ability to move the 1961 soybean crop into channels of consumption so it will not accumulate in government hands. I recognize that many people do not share my views, and I sincerely hope they are correct. However, when the U. S. government announced a support price of \$2.30 on 1961-crop soybeans they, in effect, announced to the remainder of the world that we were going to hold a price umbrella over the production of peanuts and palm kernels, sunflower seed, rapeseed and mustard seed, cottonseed, copra and the long list of oilseeds and oil-bearing materials. The real effects of this move will not be known for many months, and actually not for 2 or 3 more years. Up to this time we have been fortunate in not facing an accumulation of stocks of soybeans in governmental hands and therefore not having the problems of wheat, cotton, grain sorghums, corn and many of our other commodities which have been in surplus position. I sincerely hope we can, through united efforts of industry and government, find a place to utilize the 683-million or 700-million-bushel soybean crop of 1961 to advantage. It is going to take concerted effort on the part of all concerned.

During the past year we have seen

wild speculation in the U. S. soybean market, principally based on the rather close supply-demand situation which came about as a result of the smaller 1960 crop, brought to a head by the apparent failure of the Chinese to place their normal quantity of soybeans into world markets. Unfortunately the spectacular price rises came after most of the soybeans had left farmers' hands, and neither the producer nor the processor benefited by the market spirals. This is not a desirable type of market, but it demonstrates very clearly to all of us that a support price of \$1.85 per bushel does not necessarily mean a selling price of \$1.85, and it did demonstrate that the law of supply and demand still operates on soybeans.

This has been a year of extremely interesting developments in our Japanese market development program. I will not go into details on it, for Mr. Hayashi will do so in his report. I do want to point out that at least partially as a result of our program in Japan the Automatic Allocation system on soybean imports into Japan was placed in effect on July 1, 1961. This means that the Japanese buyer may buy as many soybeans as he wants and of such quality as he wants. Very strict dollar allocations had been in force since the end of the war, hence this year, for the first time, we will have an opportunity to determine, without Japanese governmental interference, just how many soybeans the foods manufacturers and the oilseed crushers of Japan can use when adequate supplies are available to them.

During this year we have signed an additional market development agreement with Foreign Agricultural Service which provides for the purchase and operation of four demonstration buses. Public Law 480 funds are being used to purchase the buses, two of which have now been delivered, and the Japanese trade groups with whom we work in the Japanese American Soybean Insti-

tute have agreed to be responsible for all operational costs, including staff, supplies, fuel, maintenance and repairs. The work of these buses will be under the supervision of Mr. Hayashi and his staff, and will be the first demonstration buses operated by trade groups in Japan. We will watch their effectiveness with great interest.

### Team from Japan

Last September it was our pleasure to entertain in the United States a group of representatives of the soy sauce industry in Japan. We tried to give them an overall view of the U. S. soybean industry, for they are among our best customers in Japan. In October of this year we will have with us a team of three ladies representing the foods organizations of Japan who will study our school lunch programs, our extension home economics programs, the use of soybean oil and protein in the food economy of the United States.

The economy of Japan is progressing very rapidly. More and more people are moving into income brackets which will allow them to purchase animal products—milk, meat and eggs. As this trend continues, as it surely will, and as the price of soybean meal in Japan becomes lower because of increased imports under the AA system, there will be increased usage of soybean meal in the production of poultry, meat, eggs, milk, and pork and beef. A vast field for increased usage of soybean meal is just opening up in this nation of nearly 100 million people, and our market development program in Japan is being geared to supply this need.

Through a combination of hard work on the part of staff members, a market situation conducive to interest on the part of both buyers and sellers, and to thousands of mailings made during the year, the membership in the American Soybean Association is at the highest point in history. The net paid membership now stands at 6,445 persons, the highest in history, and a 31% gain over 2 years ago. This now gives us a normal circulation on the Soybean Digest of well above 7,000 copies per issue.

The income from membership sales together with a satisfactory year in advertising sales for both the Soybean Digest and the Soybean Blue Book has given us a satisfactory year in Association finances. Like all trade organizations, our funds are totally inadequate to do all the things which should be done. It has been

necessary to hold down on expenditures, sorting out the more important pieces of work, allowing others to go undone. This, of course, is not new, and is not unique to the American Soybean Association. We have adhered very closely to the budget for the year and we hope that 1961-62 may be even better.

As the program of the Soybean Council of America has expanded, the work done by ASA for that organization has also increased. Mr. Roach is giving you further details on that program later this morning, and I will not go into detail here. Many of the things about which some of us talked and dreamed for a period of years are coming closer to reality now. Recently I had the pleasure to read some of the editorials which I wrote through a period in the late 1940's and early 1950's, pointing out the foreign market opportunities available to the soybean industry if we would but take advantage of them. Public Law 480, which was first enacted in 1954, with the attendant usage of foreign currencies with which to do such promotional work, made foreign sales work possible for the first time. It is extremely satisfying to see such dreams now becoming reality as we continue to move soybean products from the United States into food and industrial channels around the world. This year, with the huge crop, it becomes even more important to increase our exports of soybeans and soybean products, for we will have far more than we can use here at home.

### Lost Walter Scott

During the year we again lost one of our members of the board of directors. Walter M. Scott Jr., who was reelected to the board of directors again last year, was badly burned in an explosion in his plantation office very shortly after our Memphis convention, and passed away about 1 month later after suffering untold pain during his hospitalization. The unexpired 1-year portion of his term should be filled at this meeting today.

The American Soybean Association owes a debt of gratitude to the members of the board of directors—the 18 men who during the past year have guided the affairs of the organization. These men serve without pay, take their own time from their farming and/or business operations to attend board meetings and committee meetings, they go down to Washington to represent you in conferences, meetings and hearings, and

in most cases they receive little or no thanks for their efforts. These men have served you well, they have represented you to the very best of their abilities, and they deserve your heartfelt thanks.

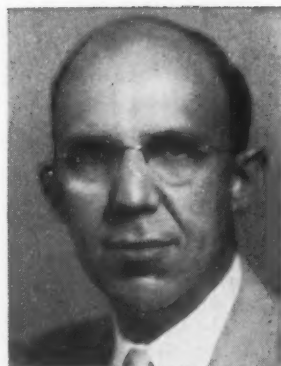
### Council Board

Your Association and every producer of soybeans in the United States also owes a debt of gratitude to the nine men who represent ASA on the board of directors of the Soybean Council of America. Again serving without pay, and taking their own time away from their farming and business enterprises, these men have represented the interests of soybean growers in Council board meetings, committee meetings and negotiations with other groups. Without a dedicated group of men willing to devote their time to a cause in which they believe, there would be no Soybean Council today.

To all members of the staff of the Hudson office I want to extend my personal thanks for their cooperation and their devotion to your interests. Without a staff of people willing and ready to go ahead with the work to be done, and willing to proceed with a minimum of expense and a maximum of accomplishment, it would not be possible to carry on the Association affairs as efficiently as has been done. To each member of the staff I want to express my personal appreciation.

Many persons have contributed to the progress of the American Soybean Association during this past year. It is impossible to name all of them here, but to all concerned I want to say that it has been a pleasure to serve as your executive officer for these more than 20 years. I hope I may continue to have that pleasure. There is a great future ahead of the soybean industry of the United States if we can prevent outside influences spoiling that future. While we have come far in soybean production and marketing, we still have far to go. I hope to see that billion-bushel crop produced and sold into channels of consumption in my tenure in this office. Opportunity still lies before us. We must direct it to the benefit of every soybean producer in the U. S. A.—Geo. M. Strayer, executive vice president and secretary-treasurer.

Construction has begun at Sioux City, Iowa, on a 1-million-bushel tank that will virtually double storage capacity at Cargill, Inc.'s soybean processing plant.



# Latest Developments on the Soybean Cyst Nematode

By JOSEPH F. SPEARS

Chief Staff Officer, Control Operations, Plant Pest Control Division  
Agricultural Research Service, U. S. Department of Agriculture, Washington, D. C.

**THE FIGHT** against the soybean cyst nematode, *Heterodera glycines* Ichinohe, is being carried to the fields and farms of the infested states in a two-pronged attack through:

1—Quarantine regulations to prevent the pest from spreading and

2—Recommended farm practices.

By following these practices, farmers in the uninfested areas can

**ASA's  
41st  
al  
Indianapolis** protect themselves against the pest, and those with infested acreage can reduce both their losses and the danger of spread to other farms by holding down nematode populations.

Both the quarantine regulations and recommended control measures utilize the latest scientific know-how for checkmating the soybean cyst nematode. The regulatory and control programs center their attack on known infested areas and adjacent farming sections with the greatest exposure.

Success of any program of this nature depends on public understanding and compliance. The soybean cyst nematode program calls for across-the-board participation by all interested groups in the fight against the pest. Federal and state pest control authorities cooperate and work closely with farmers and everyone concerned with harvesting and handling soybeans and other articles which might carry the nematode.

Growing awareness of the nematode problem, since its discovery at Castle Hayne, N. C., in 1954, has been demonstrated. For example, reports from county agents, individual farmers, and other interested persons of suspicious symptoms and unexplained crop losses have helped in a systematic search for infested areas.

The near microscopic size of the nematode contributes to the diffi-

culty in discovering and containing infestations. The soybean cyst nematode is too small to be positively identified on the basis of appearance alone without laboratory examination. Although the soybean cyst nematode can move only a few inches a year under its own power, the pest is easily spread by means of contaminated soil, bulbs, plant roots, machinery, or other articles moving from infested fields. Small populations of nematodes build up rapidly to destructive proportions when conditions are favorable to their growth and reproduction. This is particularly true in those areas where soybeans are grown continuously without crop rotation.

The characteristic symptoms of soybean cyst nematode attack are yellowing and dwarfing of parasitized plants. However, these symptoms may be absent in the presence of a light infestation. Damage from the soybean cyst nematode varies widely with density of nematode populations, age and vigor of the plants attacked, soil fertility, moisture, and other factors so that injury may range from total loss of the crop to no observable above-ground damage. The fact that no readily discernible symptoms accompany light infestations has complicated the soybean cyst nematode problem because (1) it makes it difficult to delimit infested areas, and (2) farmers may not be properly forewarned of damage to come.

The soybean cyst nematode has been positively identified from fields comprising a total of 60,000 acres in parts of eight states. These states are North Carolina, Tennessee, Mississippi, Arkansas, Kentucky, Missouri, Virginia, and Illinois. Although the figure of 60,000 acres proven to be infested by the nematode gives some indication of the problem, it is not an accurate measure of the acres actually infested. In some heavily infested counties, for example, the actual acres in-

festated, all of which are regulated under the quarantine, may be several times that checked by survey crews and proved to be infested.

In northwestern Tennessee, northeastern Arkansas, and southeastern Missouri, extensive acreage in fields intermingled with or adjacent to known infested fields are presumed to be infested and placed under regulation as soon as actual surveys reveal a continuous pattern of heavy infestation nearby. Thus, funds and manpower have been conserved for more intensive surveys on the periphery of the infested areas.

## 750,000 Acres Infested

Since the practical purpose of surveys is to determine the scope of the nematode problem and to locate and contain nematode infestations, it has been unnecessary to actually demonstrate the presence of cysts on every property. For this reason the actual infested acreage in various parts of the United States, particularly in the Mississippi Valley area, is much higher than that proved by examination to be infested, and this appreciably raises the infestation figure to be reckoned with. Based on the infestation pattern established by field surveys, it is estimated that the acreage infested in the United States may run in the neighborhood of three-quarters of a million acres.

Systematic surveys have been carried on in the principal soybean producing states since 1956 and it is encouraging to note that no new states have been found infested since 1959.

In North Carolina, where the soybean cyst nematode was originally discovered in 1954, crop losses are increasing each year. A total of nine counties are now known to be infested. On some farms, crop losses have been estimated to be as high as 80% to 90%. In the Castle Hayne area, when the nematode was first discovered, approximately 1,200 acres of soybeans were grown. To-





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day, less than 100 acres are planted. In the northeastern counties of North Carolina damage has not been as severe as in the southeastern section. However, soybean cyst nematode populations are increasing and crop damage is becoming more evident each year.

#### **Tennessee Infestations**

In Tennessee the soybean cyst nematode was first observed in 1956. Nine counties are now known to be infested. All of the infestations are in western Tennessee and most of the damage is occurring in the northwestern part of the state, particularly in areas of light, sandy soil. Many farmers are changing farming practices to avoid damage from the nematode. Corn or cotton are being grown on fields showing most damage.

In Lake County, Tenn., about 35,000 acres were planted to soybeans before the occurrence of the nematode. Due to soybean cyst nematode infestations, about 10,000 acres have been diverted to other crops. This year, however, more beans have been planted because floodwaters have prevented the planting of crops that would nor-

mally have been planted. This spring some fields of early beans in Lake County were plowed up and re-planted because of soybean cyst nematode damage. Present indications are that damage to the second planting will be as great or greater than it was to the first planting. Agricultural officials estimate that the soybean cyst nematode is costing the farmers of Lake County a half million dollars annually.

In neighboring Dyer County an estimated 7,000 acres have been diverted to other crops because of nematode injury to beans. The annual loss here is running in the neighborhood of \$120,750.

In Obion County, which normally produces 50,000 acres of beans, some 5,000 acres have been taken out of beans and planted to corn, with an estimated annual loss to the bean industry of \$94,000. The same pattern holds true for Lauderdale County, although known infestations are somewhat less than in the other Tennessee counties. A recent estimate indicated that the loss here because of this pest will be approximately \$50,000.

The infestation in Missouri was discovered in 1957. Altogether, six

counties are infested in the southeastern bootheel portion of the state. Here, too, farmers experience most damage from the nematode on light, sandy soils. Recent field observations of 166 infested fields showed a loss of marketable beans ranging up to 25%. Farmers are also diverting some of the more heavily infested fields to other crops.

In Arkansas, the soybean cyst nematode was first observed in 1957 and is now present in six counties. The largest areas of heavy infestation occur in Mississippi County. Damage in Arkansas seems to have been limited to light, sandy soil, particularly during years when there is a short water supply. Damage in the Delta black loam soils has been less noticeable. Many growers in Arkansas are now practicing rotation on fields known to be infested.

In Kentucky, the nematode was first observed in 1957. Two counties are presently infested. The damage to soybeans here on heavily infested farms follows the same pattern as in the neighboring state of Tennessee. The most severe damage is confined to local areas in Fulton County near the Tennessee line.

In Virginia, the first infestations were reported in 1958 and three counties are now known to be infested. However, the principal area of infestation is in Nansemond County where soybeans are not grown commercially. Most of the beans planted here are seeded by broadcasting in corn at the time of the last cultivation and are used for hog feed. Under such conditions farmers never recognize damage be-

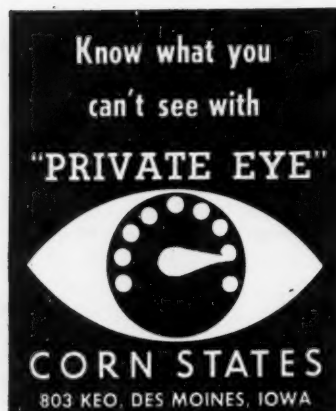
# **INOCULATE SOY BEANS**

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cause symptoms are not visible and yields not determined.

In Mississippi and Illinois only a small, light infestation exists in one county of each state.

Although no simple solution to the soybean cyst nematode problem has yet been found, research during recent years has disclosed a considerable body of new knowledge which should aid in controlling the pest more efficiently. Four major lines of investigation are currently being pursued. These are (1) basic general information about the life history and habits of soybean cyst nematode, (2) the use of chemicals to control the pest, (3) effects of rotation and other cultural practices, and (4) development of nematode resistant varieties of soybeans.

### Nematode's Weaknesses

The study of life history and habits of the parasite and how it damages plants is aimed at discovering weak links in the parasite's life history and other basic facts which might point the way to more effective control methods.

Extensive experiments in Tennessee and North Carolina have shown that the soybean cyst nematode can be controlled by one of several nematocides in the soil in advance of planting. Where infestation is severe, yield increases in nematocide-treated plots range from 50% to 100% above adjacent untreated control plots. Where the nematodes are uncontrolled, the plants are sparsely nodulated. Where the nematodes are controlled, nodulation is normal. However, it has been demonstrated that the rate of application of nematocides which produces maximum yields of soybeans does not kill all the nematodes and the remaining ones in the soil increase on the healthy plants. Thus, the application of nematocides, depending on the rate, is effective for only one or two crop seasons.

At the present price of nematocides and soybeans, the use of nematocides by the farmer is not economically feasible.

The most practical methods now available to individual growers in holding down soybean cyst nematode populations in the infested fields is the crop rotation program. Growers with infested land can reasonably expect to have a good crop of soybeans following rotation of nonhost crops.

Experience has shown that it is much easier and cheaper to keep land free of nematodes than to control the pest after it has become

established. Rotation has proven its value as a preventive measure. Growers particularly in infested states can protect their crops and reduce the chances of their farms becoming infested by inaugurating a 2- to 3-year rotation planting.

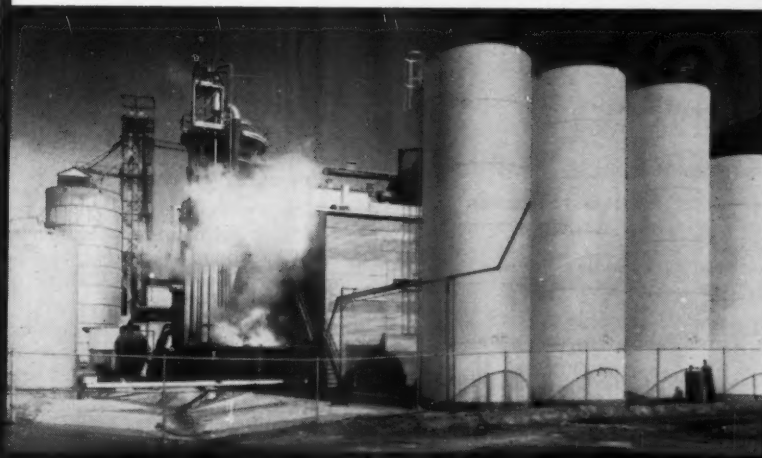
Plant breeders are working on soybean varieties with resistance as another means of controlling this nematode. Experiments have indicated that resistance already exists in some commercial soybean varieties.

Success of the soybean cyst nema-

tode program, like other pest control programs, depends on full compliance with regulatory safeguards and widespread use of practices recommended to control the pest. Until a practical way to eradicate the soybean cyst nematode has been developed or resistant varieties of soybeans are available to growers, an effective containment program is essential. This means that for some time to come we must rely on regulatory measures and rotation of nonhost crops for controlling the pest.



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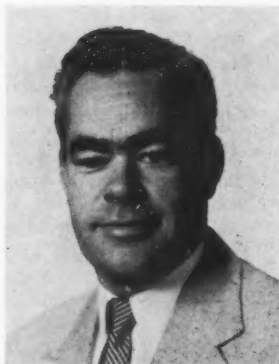
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# Soybean Development on the East Coast

By **GEORGE E. SPAIN**

Agronomy Extension Specialist, North Carolina State College, Raleigh, N. C.

**MY** REMARKS will be centered on soybean development on the East Coast and, as requested by your program committee, will include the states of Delaware, Maryland, Virginia, North Carolina, South Carolina and Georgia. Since I cannot presume to speak personally for each of these states, may I acknowledge the efforts of the following people who have contributed to this report.

Mr. W. H. Mitchell, assistant professor of agronomy, University of Delaware.

Dr. W. G. Rothgeb, professor of agronomy, University of Maryland.

Dr. T. Jackson Smith, professor of agronomy, Virginia Polytechnic Institute.

Mr. H. V. Rogers, extension agronomist, Clemson College, S. C.



Mr. J. R. Johnson, head of agronomy extension, University of Georgia.

And from North Carolina, I am indebted to many people for assistance.

Each of these states has made an interesting and significant contribution in the pioneer days of soybean development. However, the East Coast States were not destined to experience the tremendous growth in production that developed in certain other states from the 1920's until more recent years. To simplify the statistics, may we look at the production over 5-year intervals, beginning with 1950.

The total for the several states has increased from 676,000 acres in 1950 to 1,792,000 acres in 1960. This is an increase in acreage of 165%.

This acreage and production may seem small compared to the production in some states. However, this production is very important to us, and contributes significantly to our economy.

## Processing Spectacular

The development in soybean processing, in terms of modern and efficient processing capacity, has been even more spectacular than production during the past few years.

For many years, oil processing in this area was primarily concerned with cottonseed, and soybeans helped fill the season if supplies of cottonseed were not adequate for continuous operation.

In the early fifties only two solvent processing plants were operating in the six states. They were Townsends, Inc., Millsboro, Del., and Buckeye Cellulose Corp. at Augusta, Ga. In 1958, expansion started. The Selma Soybean Corp. installed a 100-ton-daily unit that was the first solvent plant in North Carolina. Since that time the following plants have begun operating with solvent processing equipment in these six Eastern States:

Hartsville Oil Mill, Hartsville, S. C.

Southern Soya Corp., Estill, S. C.  
Ralston Purina, Raleigh, N. C.  
Planters Cotton Oil & Fertilizer Co., Rocky Mount, N. C.  
Cargill, Inc., Norfolk, Va.

Beginning operations this fall will be a new plant in Salisbury, Md., now being completed by A. W. Perdue & Son. It will have a reported capacity of between 5,000 and 10,000 bushels of soybeans daily.

In rough calculations, this totals approximately 30 million bushels of solvent processing capacity, most of which has been installed since 1958.

Not to be overlooked are a number of facilities that have been operating for several years with screw-press equipment in Georgia, South Carolina, and North Carolina. A listing of these operations may be found under the section of "processors" in the Soybean Blue Book. These add several million bushels more to the total processing capacity. Present facilities could process the 1960 production of approximately 35 million bushels in these six states.

Not all these plants operate continuously on soybeans. Cottonseed accounts for a major part of the crush of some of them.

## Export Market

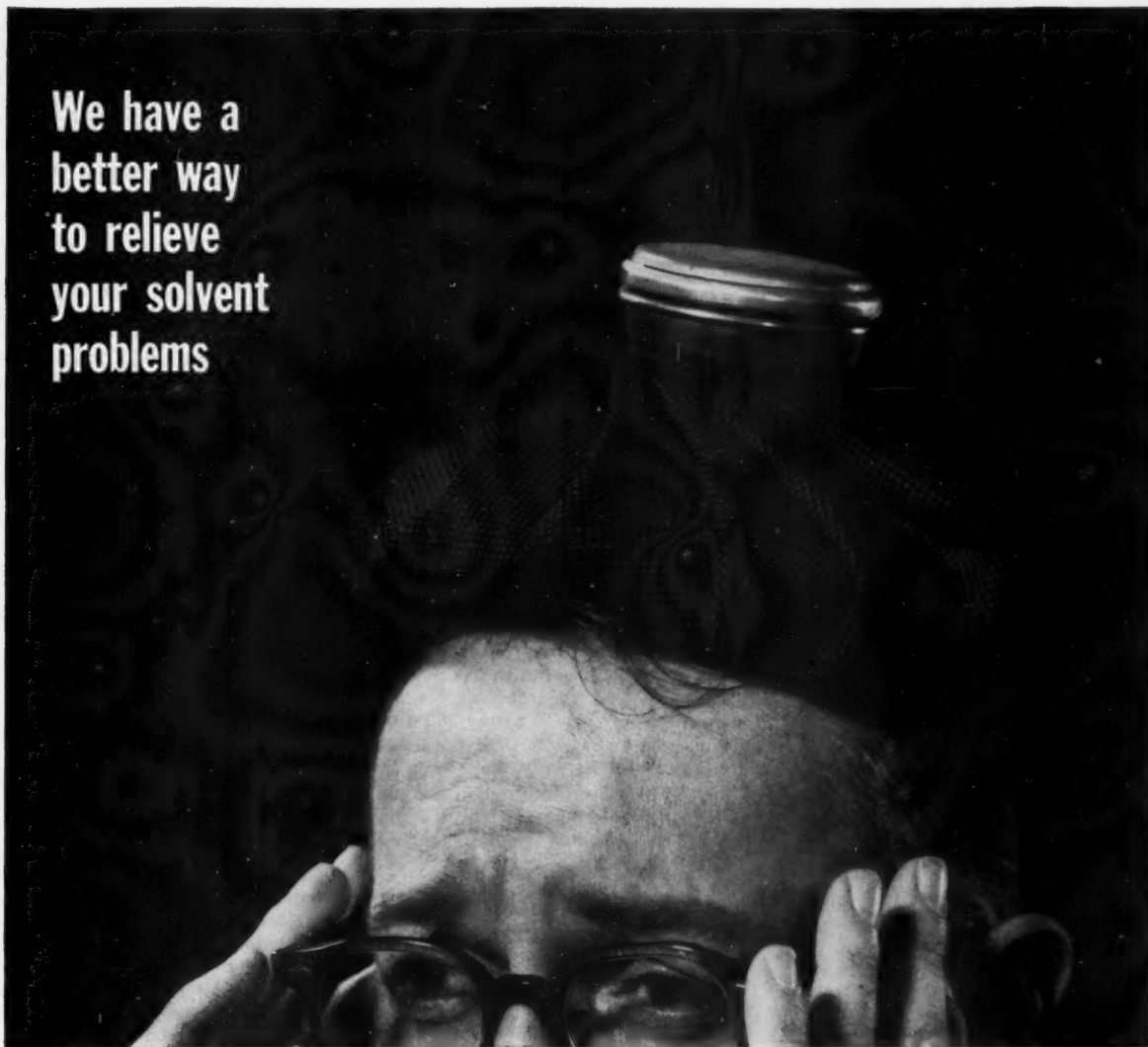
The convenient location of our ports has allowed a strong movement of our soybeans into the export market. Within the states under discussion are the facilities at Baltimore, Md., and Norfolk, Va. North Carolina has facilities at Morehead City for ship loading, but has not had near the activity in export as has Norfolk, Va. Virginia and Maryland report most of their production moves through these channels into export, as does a sizable quantity from North Carolina and other states.

In 1961 the South Carolina State Legislature enacted legislation authorizing the erection of facilities at Charleston for exporting soybeans. This could have a marked effect on the marketing of soybeans in North

### SOYBEAN PRODUCTION

DELAWARE			
Year	Acreage	Yield per acre	Production (bushels)
1950	63,000	14	882,000
1955	105,000	20	2,100,000
1960	189,000	24	4,536,000
Percent average increase 1950-1960—200%			
MARYLAND			
1950	71,000	17	1,207,000
1955	155,000	20	3,100,000
1960	225,000	25	5,625,000
Percent acreage increase 1950-1960—217%			
VIRGINIA			
1950	152,000	19	2,880,000
1955	201,000	20	4,020,000
1960	305,000	23	7,015,000
Percent acreage increase 1950-1960—100%			
NORTH CAROLINA			
1950	297,000	16	4,752,000
1955	327,000	15.5	5,068,000
1960	529,000	22.5	11,902,000
Percent acreage increase 1950-1960—78%			
SOUTH CAROLINA			
1950	67,000	12	704,000
1955	189,000	15	2,835,000
1960	451,000	18	8,118,000
Percent acreage increase 1950-1960—573%			
GEORGIA			
1950	26,000	11	286,000
1955	57,000	12	684,000
1960	93,000	16.5	1,534,000
Percent acreage increase 1950-1960—257%			

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Carolina, according to Mr. Rogers, our South Carolina reporter.

The development of commercial handling and storage facilities, and farm storage, could almost be classified as "explosive." North Carolina, for instance, has seen commercial storage increase from 5,550,000 bushels in 1950 to 22,043,950 bushels in 1960. Paralleling this has been an increase in "on-the-farm storage" to 4,259,555 bushels of metal storage bins, mostly constructed since 1950.

Even so, storage is still a bottleneck in the orderly marketing of soybeans as well as other grains. Present facilities are sometimes taxed so heavily at harvest time that soybeans and corn cannot be adequately or properly dried for highest quality.

Most soybeans move from the combine to market in these states. Processors have been required to carry about all the storage capacity they can, but few if any can store their annual requirements. Much of the other commercial and farm storage is used for corn.

The East Coast has not been, historically, a grain production and marketing area, and farmers have been hesitant to adopt storage and marketing practices that are apparently routine in certain other states. Only in recent years has grain been bought and sold on any kind of a grade basis in North Carolina and several other of these states. A concerted educational effort of the state departments of agriculture, the extension service and other agricultural agencies has just about placed our grain marketing on the U. S. Standard Grades.

Those of us who may be more directly involved in production have to take our hats off to the handling, storing, exporting, and processing interests that are presently operating in our area. They have been an integral part of our soybean development.

There are several reasons for this expansion of soybean production and processing. A major reason is that we have a need for the soybean meal for poultry and livestock feeds. These six states produced 784,750,000 broilers in 1960, according to the Agricultural Marketing Service statistics. We probably will never produce enough soybean meal to meet those needs, much less the needs for dairy and livestock.

Another reason is that soybeans were the one crop to which we could plant some of our acres that was not bursting at the seams from storage stresses, and the price was, therefore, favorable for the farmer to grow

them. Coupled to this was the fact that the acreage of some of our allotted crops was reduced, and the prices of other crops were not as attractive as that of soybeans.

Still another reason was the transition of some of our farms to crops that could be completely mechanized, due to the rising cost of labor and, in some particular areas, a deficit of farm labor.

Our convenience to export outlets was certainly an influential factor, which again relates to soybean prices.

### Research, Extension

Recent developments in new varieties, improved fertility and cultural practices have enabled farmers to increase yields, thereby making soybeans more attractive as a market crop. We like to think the production research, extension programs, and efforts of other agricultural agencies have contributed to this development. Each reporter from these East Coast States has outlined research and extension programs at his institution that would certainly be of interest to you, but time does not permit a discussion of them here.

I'm sure each of you file your copies of the Soybean Digest, so you can look back at the challenging editorials written by Geo. M. Strayer, or to the technical articles on such subjects as weed control in various states, or to review the assumptions and price predictions made by Dr. T. A. Hieronymus the year before. Kent Pellett, managing editor of Soybean Digest, visited the East Coast in 1959, and published a series of well-illustrated articles on soybean development there in the Digest issues of December 1959, January 1960, and February 1960. I recommend you thumb back to them for the very fine review of our soybean work as reported by Mr. Pellett.

What is the future of soybeans on the East Coast? Several influences, favorable and unfavorable, must be considered. On the plus side of the ledger, we think, is the demand for the product.

In terms of soybean meal needed in the area, we cannot supply the present needs from local production. We anticipate continued progress in poultry, livestock and dairying enterprises, so we do not look for these needs to subside in the near future.

Some oil is refined in the region in such locations as Atlanta, Macon, and Savannah, Ga.; Charlotte, N. C., and Baltimore, Md. The remaining oil moves out of the area.

Export markets are important to us. There are many here who have a much better insight as to the future of our exports than I have. On the assumption that export demands for soybeans will continue strong, we hope to help supply that market. The convenient location of our port facilities offers us encouragement.

We have lots of land available. Just a little later we will discuss the possibilities and limitations of some of our soils. However, our average farm size is increasing so that economical units of production are possible as these larger units mechanize.

In addition to the farm land presently cultivated, new land development projects are attracting a great deal of interest in some of these states. In North Carolina, where I'm a little better acquainted, there are numerous small development programs ranging in size from a few acres on present farms to several hundred acres. One farmer, for example, has cleared and is now operating approximately 10,000 acres, about half of which is in soybeans.

The largest such operation that I am familiar with is the Lake Phelps Development Project now under way in Hyde, Washington and Beaufort counties by the Lake Phelps Development Co., a subsidiary of American Land Corp. Farm land here is being carved out of the wilderness by draining and clearing with heavy equipment. More than 100,000 acres are planned for development in this one project.

The climate in this region varies considerably from Delaware to Georgia, but may I say, in general, we have a long frost-free growing season with adequate rainfall.

The distribution of this rainfall is usually suitable for relatively good soybean production.

Before allowing these advantages to dominate our thinking, let me outline some of our limitations for future soybean growth.

There are definitely limitations in our soil type and topography. From Georgia through Delaware our soils bordering the coast were formed from unconsolidated rock materials originally deposited in the Atlantic Ocean, and which made up the marine floor until it was elevated to its present position. This area is classified as the Coastal Plains, but it is variable in its soil properties. In North Carolina, for instance, there are seven major marine terraces in the Coastal Plains that reflect various periods and conditions in soil development.

Some of these soils immediately adjacent to the coast are only a few



feet above sea level. Because of poor drainage, organic matter has accumulated, leaving fertile, black soil that must be drained to make it suitable for field crops. This part of the Coastal Plains is called the "Tide-water area."

Soybeans on the East Coast are grown primarily on these coastal soils. Large areas are cropped in a corn-soybean rotation, much the same as in the Cornbelt. As we travel inland there are transition zones where the fields take on more slope. Even though they are still classified broadly as Coastal Plains, extra caution is necessary to prevent erosion.

The area known as Delmarva is a peninsula lying between the Chesapeake Bay and the Atlantic Ocean, and is divided between the states of Delaware, Maryland, and Virginia. The soybean production of Delaware and Maryland is concentrated largely in this area. Virginia has some soybean production there, but their production expands west of the Chesapeake Bay. Poultry production is intense in Delmarva along with truck crops in certain parts of the peninsula.

Lying west of this Coastal Plains region is an expanse of rolling, red clay soils known as the "Piedmont." The farming pattern here is largely pasture, grain, cotton, livestock and poultry. Soybeans have not expanded into the Piedmont as a rule, but here is a potential for some development if the demand for soybeans were strong enough. Such a development would require caution in soil management to avoid severe erosion. The heavy clay soils are usually considered less favorable for soybeans. There are more difficulties in getting stands. These soils become crusted following heavy rains, and cultivation is more difficult than on the Coastal Plains soils.

All these states except Delaware have mountain elevations that prohibit field crops production except in the valleys. There is a definite limit here in soybean expansion.

I might add that most of our soils require lime and fertilizer to support economical yields, which adds to the cost of production.

Small farm size is another limitation in soybean development in some states. The average size farm in North Carolina is approximately 83.4 acres. This rules out economic units of production on many farms. The trend in these East Coast States is to larger farm size, however.

Although we consider our climate favorable in some ways, it has a way of working against us in others. This warm, humid climate favors insects,

diseases and weeds. There is a never-ending battle against pests.

Humid conditions at harvest time is a constant problem with us. In many seasons the harvest is delayed and soybean quality is lowered by prolonged rainy periods.

Names like Hazel, Connie, Diane, Ione, and Donna are glamorous, but they mean trouble to farmers on the East Coast, for these are names of destructive hurricanes that have hit several states on our coast in recent years.

No small limitation to soybean expansion is the competition from other crops. Allotted crops of tobacco, peanuts, and cotton will require the first acreage and the better soils. Truck

crops in many areas dominate the agricultural pattern. Because soybeans are a host to many diseases and insects that also attack these crops, they are not recommended in the rotation, especially for tobacco or peanuts. Another dimension of this competition is for the time and effort of the farmer for soybeans, if they are grown on acres other than his tobacco or peanut rotation acres. The soybeans may receive leftover land, leftover time, and maybe leftover fertilizer if any.

Corn, then, becomes the chief competitor for soybeans after excluding these high-value-per-acre crops. The relative price situation at any given time can well influence the choice of

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corn or soybeans. So far as need is concerned, the need for corn is for the same livestock and poultry enterprises as for soybean meal.

### What of the Future?

What do the several East Coast States think of the future for soybeans as translated by those reporters previously named?

Georgia says, generally speaking, farmers realize more cash income from corn than soybeans. A small increase is expected, but low yields of soybeans and a decrease in small grain, the usual rotation crop with soybeans, limits the farmers' interest at the present time. However, the potential is enormous if this interest is awakened.

South Carolina thinks soybeans have a bright future. No potential acreage is estimated, but their research and extension programs are overcoming one of their major limitations, low yields.

In North Carolina there is a cautious enthusiasm. Present research and extension efforts are directed at increased efficiency rather than more acres. However, the two go together. We hope that any possible additional acreage will be based on a sound economical crop management program of land use, rotation, and proper cultural practices. We could well reach 750,000 acres by 1965 or before, depending on the relative price structure of soybeans compared to other commodities. There is a potential of 1 million acres of production by 1970 if the price remains strong.

Virginia has had a published prediction of a 50% increase by 1975 (Misc. Publication No. 1, Dr. H. N. Young). This would put Virginia at approximately ½ million acres. This potential is even greater in their Coastal Plains if some of the present acreage of small grain, forage, or corn is replaced by soybeans.

Dr. Rothgeb sees the possibility of soybean acreage expansion for Maryland to 350,000 to 375,000 acres, a limit imposed by the availability of suitable land in the Coastal Plains. He suspects the time involved in this expansion could be definitely shortened by a discovery of ways to obtain immediate response of soybeans to applied fertilizers, and also by more processing capacity. This would give them more meal for their needs and provide some buffer for the possibility of relatively adverse prices of soybeans. Their traditional livestock, dairy, grain and pasture farming patterns in the Piedmont will probably not be influenced too greatly by soybeans at the present time.

In Delaware, soybean acreage already exceeds that planted to corn. The limit to their production seems to be also imposed by the limit of land and relative prices of soybeans to corn.

Taken as a whole, these six East Coast States have a definite potential for 2½ million to 3 million or more total acres of soybeans. Whether this increase in acreage materializes will depend on the effect of any possible governmental programs, and the area, national,

and world needs for soybeans reflected by the bid at the market place. Only time will reveal these possibilities.

I could not miss this opportunity to express our appreciation to the American Soybean Association for all its efforts, and especially those of soybean promotion. Our farmers and industries are reaping the benefits of those efforts as well as the farmers and business interests in other states. We appreciate your interests in our soybean development.

### South Carolina Yield Contest

FARMERS of six South Carolina counties have two crop growing contests available to them this year, according to Colleton County Agent L. W. Alford. These are the statewide 5-acre cotton contest and the area 5-acre soybean contest open to farmers of Allendale, Bamberg, Barnwell, Colleton, Hampton, and Jasper Counties.

This is the second year for the soybean contest. Prize money of \$250 and \$150 for first and second prizes will be furnished by Southern Soya Corp., Estill, S. C.

Claude H. Allard has been appointed director of marketing of the Naugatuck chemical division, U. S. Rubber Co. Formerly superintendent of chemical production at the division's main plant at Naugatuck, Conn., Mr. Allard replaces Harold M. Parsekian.



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# Report on the Japanese American Soybean Institute

By SHIZUKA HAYASHI  
Managing Director



I AM PLEASED to be here again to report personally to you the activities that have been carried out by the Japanese American Soybean Institute since my last report.

Since the aim of our program as provided by the contract between the American Soybean Association and Foreign Agricultural Service is to develop the Japanese market for U. S. soybeans we have been directing our activities toward promotion of the various soybean products produced and sold in Japan.

The ways and means toward this achievement involve educating and encouraging the consumers to take more protein and fat in the daily diets by eating more soybeans and soybean products such as miso, tofu, shoyu, and natto, the traditional Japanese foods; besides the relatively new foods such as soy flour to be mixed with wheat flour in bread, hot cakes, doughnuts, and even in soup. Promotion of soybean oil consumption also has top priority. These promotional activities are being carried out through various channels.

## 1—Government Agency

The Ministry of Agriculture and Forestry has under its control approximately 2,000 home advisors, 40 to 50 on the average stationed in each of the 46 prefectures. Each home advisor covers an area that has about 4,000 families or approximately 20,000 population.

The relation between the home advisors and the rural housewives is close and intimate. By virtue of training and education the home advisors have won the position where they are now regarded by the housewives as consultants to all rural families. Suggestions and opinions of the home advisors are unconditionally accepted by the housewives. We are using this network, under contract with the Ministry of Agriculture, to educate the housewives on

the nutritional values of soybean products and the advantages of consuming more soybean products in their diets.

This contract provides for 3-day exhibitions with cooking demonstrations, lectures and display of various panels to be held in three places in each prefecture. So far about 24 prefectures have been covered out of 46. Approximately 400,000 people have attended.

## 2—Private Professional Organizations

We have a contract with one of the most influential and popular organizations which has groups of women all over Japan as its members. The leaders of these groups have had actual dietetic experience and education. This organization pushes its educational program under such slogans as, "Let Us Eat Oil Once a Day," or, "Use in Frying Pan Once a Day."

## 3—Trade Press

Contracts are being entered into with the trade press to carry out jointly with them events to promote soybean products. By utilizing the press we get the advantage of wide dissemination of the news to the public at relatively low cost.

## 4—Industrial Groups

We have contracts with the different soybean groups to promote products such as miso, shoyu, tofu, soybean oil, etc. Each of these groups has its own methods of promotion.

For example, a contract with the Soy Sauce Association involves lectures, cooking demonstrations, and exchange of views with the high school home economics teachers. This aims at the large number of students each teacher has in her class.

A contract with the Oil Processors Association involves soybean oil cooking contests arranged through the network of health centers where a great number of housewives are reached.

Under contract with the Tofu As-

sociation, meetings are held with not only the manufacturers but also people in general. This is to demonstrate the advantage of producing the so-called "soft tofu" which can be produced with very little loss of water soluble protein. Actually the aim is to encourage using U. S. soybeans because soft tofu can best be made with U. S. soybeans.

A contract entered into with the miso groups calls for promotion largely through advertisements in magazines, daily newspapers, television, radios, and even by utilizing the theaters. This type of promotion is expensive but the major cost is borne by the miso groups themselves. JASI shares only a small portion.

## 5—Welfare Ministry

We had until the beginning of 1960 a series of contracts with the Welfare Ministry to promote soybeans and soybean products through the network of health centers. This has been discontinued. However, I would like to emphasize that even in the absence of contracts the prefectural health centers are including, in their text, recipes using soybeans and soybean products. It has become the basic dietary policy of the Welfare Ministry to include soybeans.

The Welfare Ministry has constructed several new kitchen buses in addition to those which are loaned to it by the Western Wheat Associates and the American Soybean Association. The recipes used on these buses include a number of soybean dishes even in the absence of a contract. We know that the eventual aim of FAS is to get the government and the groups in Japan to put continued emphasis on soybeans and soybean products even when U. S. P. L. 480 funds are exhausted.

## 6—Seminar for Top Management

The importance of public relations, due to its relatively short history, has not been taken seriously



by top executives. We have come up against numerous cases that taught us that soybeans and soybean products could be more salable if only the top executives were more conscious of public relations and marketing research. We felt it was most necessary to familiarize the manufacturers with this idea.

Last January we set up a seminar on sales promotion, inviting only the top management. About 40 companies and organizations from various parts of Japan participated. Many companies have since carried out similar seminars on sales promotion.

I want to add two notes which I am sure you will be proud of. I am most happy to report to you that the soybeans you produce have been found most suitable and profitable for manufacturing soy sauce. The Shoyu Research Institute has carried out, with no financial support from JASI, an experiment with Japanese and U. S. soybeans which lasted for nearly a year. The result: no difference in quality between the two but a yield difference of about 5% in favor of U. S. soybeans. This test has to be confirmed by further experiments on a commercial basis.

More good news is the advent and industrialization of soy milk. Whenever the occasion arises, we are lecturing on the value of soy milk and distributing literature on the subject. A few plants have been set up and soy milk is now finally on the market.

#### Future Plans

At last the import of U. S. soybeans has been liberalized. The restriction on U. S. soybeans has been lifted. Since July 1, U. S. soybeans have been freely imported into Japan.

I do not think that the prediction made in my report last year needs to be revised at this moment. The requirement for soybeans for human

consumption to fill the needs of the Japanese population for protein and oil will be increased. Likewise, the demand for soybean meal for livestock feed will increase by a still larger percentage. At least 18.3 million bushels of soybeans will be imported annually in addition to the average quantity imported in the past.

Let us review the sources of various foods now supplied to the Japanese population. Of the total 67 grams of protein and 26 grams of oil in the daily diet, soybeans supply 11 grams of protein and 7 grams of oil, thus constituting the most important food sources supplying both protein and oil. The 1961 intake of oil is estimated at 12.7 grams per capita per day or less than 10 pounds per year. This is less than one-fifth of the average of western countries. According to the 10-year plan of the Japanese government, in 1970 the intake of fats and oils will be three times that of the present. This will require a total oil supply of 1.4 million metric tons.

Where and how Japan can get this supply is a problem. Out of a total supply of about 470,000 tons of oil and fat only about 170,000 tons are supplied from domestic production. We have to look to other sources for the major portion of this quantity. Japan has been importing various oil-bearing seeds as well as lard, hog grease, beef tallow and soybeans to produce nearly 300,000 tons of oil. Soybeans constitute 50% of this. Assuming that these sources of oils and fats will have to be depended on in the future, the total soybeans required in 10 years, according to the government plan, will have to be three times that of the present. That will be approximately 2.4 million metric tons, or 88 million bushels in terms of beans.

In the past, when the importation of soybeans was restricted the price

of soybeans was the highest of all oil-bearing materials. The high price of soybeans that has prevailed in Japan was definitely due to the import restriction.

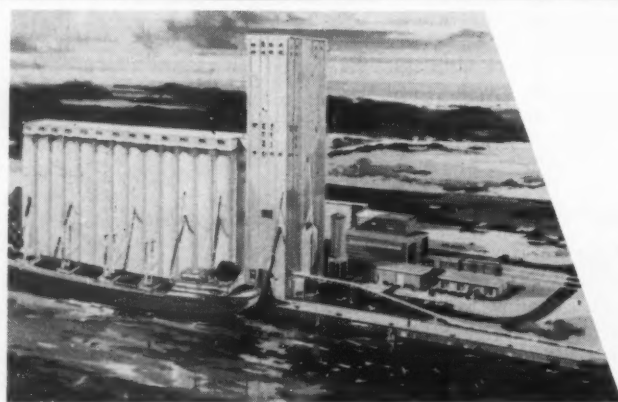
Liberalization of soybean imports will change this situation. Theoretically, soybeans in free trade will have to be lower in price to compete with the world market. It is expected that the price of soybeans will gradually follow the downward trend until they get lower than other oilseeds. Various oilseeds imported in the past, if the price of soybeans comes down, will eventually be replaced by soybeans. This is the basis of my prediction that the quantity of soybeans, which will be imported under the automatic allocation system, will increase.

Soybeans are the most complete vegetable protein at amazingly low cost. The cost of the soybean is one-tenth the cost of rice, one-fifth that of meat and fish nutritionwise. This gives me the courage to preach to the population all over Japan that rice is overeaten. If 10% of the rice were withdrawn from our diet, it would save the money to buy double the quantity of soybeans, and double the intake of oil and protein.

The lower soybean oil price under free trade should permit the margarine manufacturers to use soybean oil, perhaps as the major ingredient.

Last but not the least important is soybean meal for livestock feed. The livestock industry, especially the poultry industry, is undergoing a sharp upward advance. Soybean meal constitutes only 5% of the mixed feed total of 2.5 million tons.

I will conclude my report by emphasizing the need for continuous lecturing and preaching until all Japan becomes aware of the value of soybeans and their products. Going out in the field to promote is more effective than broadcasting by sitting in the office. This needs stamina, but it must be done.



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# Current Status of Soybean Research Under P. L. 480

By **WALTER M. SCOTT**

Assistant Director Foreign Research and Technical Programs Division, Agricultural Research Service, U. S. Department of Agriculture, Washington, D. C.



**YOU WILL** recollect that Dr. G. E.

Hilbert, director of the Foreign Research and Technical Programs Division, addressed your Association in August 1959 on the subject of the agricultural research program in foreign countries under U. S. Public Law 480. At that time, this program was in the early stages of development and, as director of the European regional research office in Rome, Italy, I was very busy in making arrangements for the sponsorship of research projects in the following countries in Europe and the Near East: Finland, England, France

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Spain, Italy, Egypt, Turkey, Israel, Yugoslavia and Poland.

Dr. Hilbert explained to you that this foreign research program is financed by foreign currencies which accrue to the U. S. government from the sale of surplus agricultural commodities. Under Section 104 (a) of P. L. 480, Congress authorized the use of such currencies to finance research designed to expand the uses of agricultural commodities, and to find new markets for them. At a somewhat later date, under Section 104 (k) of this law, Congress extended the use of these currencies to include research in the broad areas of farm, forestry and marketing research.

In order to administer this foreign research program satisfactorily, the Foreign Research and Technical Programs Division established a regional office for Europe and the Near East in Rome, Italy, in November 1958. A regional office for the Far East, extending from India and Pakistan to Japan and the Philippines, was established in New Delhi, India, in December 1960. In addition, a P. L. 480 research program is being developed in South America. For the present, the latter program is under the supervision of the Washington office.

Our research program under P. L. 480 has been well received in all countries where foreign currencies

are available for financing such research. This is evidenced by the fact that as of July 1, 1961, 192 grants and one contract had been approved for research in the following countries: Finland, France, India, Israel, Italy, Japan, Pakistan, Peru, Poland, Spain, Turkey, United Arab Republic (Egypt), United Kingdom, Uruguay, and Yugoslavia. These grants are for periods up to 5 years and the equivalent of \$11,761,161 has been earmarked for their financing.

Approval has already been given to 13 grants and one contract for research in foreign countries on projects of interest to the American Soybean Association. Dr. Hilbert told you about the plans for some of these projects. I will now supplement his information and devote attention to the current status in individual countries of the soybean research under P. L. 480 which is either under way or in the planning stage.

## Approved Grants

**Finland.** "Investigation of continuous multistage countercurrent crystallization of linseed and soybean fatty acids as a practical method of producing pure unsaturated fatty acids." University of Helsinki, Viik, Malmi.

Grant of 22,516,000 Finmarks, approximately equivalent to \$70,500, approved February 1960.

If the unsaturated fatty acids (linoleic and linolenic) could be obtained from soybean oil in a relatively pure state and at a reasonable cost, they would provide for this oil expanded industrial and food markets. This grant provides for an investigation of continuous multistage countercurrent crystallization of soybean and linseed fatty acids. Research has been under way for about 1 year. Currently, crystallization from several organic solvents has been effective in separating out the saturated fatty acids from one another. Further experiments are in progress. Attention is also being given to the separation of the un-

saturated fatty acids by the so-called zone refining method and the preliminary results look promising.

**France.** "Investigation of the preparation and properties of alkylaryl ketones and their derivatives from vegetable oils and animal fats." Institute for Research on Oils and Fats, Paris.

Grant of 264,640 new French francs, approximately equivalent to \$54,000, approved June 1960.

This grant provides for studies of the condensation of aromatic hydrocarbons and phenols, such as benzene, naphthalene, phenol and naphthol, with esters of saturated fatty acids derivable from vegetable oils and animal fats. The resultant products will be evaluated for such uses as antioxidants, detergents, emulsifiers, fungicides, lubricant additives and plasticizers. Attention has been given to derivatives obtained from esters of palmitic and stearic acids. Both of these acids are present in soybean oil, as well as in other vegetable oils and in animal fats. Samples of suitable products will be made available to the U. S. Department of Agriculture for evaluation.

**Israel.** "Investigation of soybean saponins as related to the processing of petroleum ether-extracted meal for feed, and to the preparation of soy foods, to provide information basic to improving the nutritional value of soybean protein products." Department of agricultural biochemistry and animal nutrition, Hebrew University, Rehovot.

Grant of Israeli pounds, approximately equivalent to \$113,600, approved March 1961.

The production of soybean meal for feed use has assumed major importance in the United States. All of this meal is processed by cooking to inactivate certain ill-defined antinutritional factors, such as the saponins. However, there is currently very little quantitative data on the saponin content of soybeans and its variation in different varieties grown

in different locations. The research under this grant involves a determination of the amounts and kinds of saponins in several varieties of U. S. soybeans. The fate of these saponins during the processing of the meal will be investigated in relation to the nutritional quality of the meals for feed and food purposes. This grant was approved only a few months ago and no research results have yet been reported.

"Development of a rapid method for the determination of the influence of storage on the protein nutritive value of cereal grains and feeds." Israel Institute of Technology, Haifa.

Grant of Israeli pounds, approximately equivalent to \$103,800, approved January 1961.

Samples of wheat, rice, dried peas, soybeans, and oilseed meals will be stored under a variety of conditions of temperature, moisture and oxygen access. Periodically, the amount of nutritive protein (lysine) contained in these products will be determined. The work on this project is just starting and no research results have yet been reported.

**Italy.** "Investigations of the controlled thermal polymerization of soybean and linseed oils, and of the separation and characterization of the reaction products." Experiment Station for the Italian Oil and Fat Industries, Milan.

Grant of 32,322,042 Italian lire, approximately equivalent to \$52,000, approved March 1960.

Protective coatings made from soybean and linseed oils and their

derivatives have been losing their position to synthetic paints in recent years. The increasing ascendancy of the synthetics can be attributed in large measure to the considerable research efforts of the chemical companies to improve the performance characteristics of the synthetic products. The properties of an emulsion paint containing thermally polymerized oil are determined by the composition of this oil. The research planned for this project is designed to obtain such information. Progress has been made in separating from a thermally polymerized soybean oil fractions of gradually increasing molecular weight. Attention is being given (1) to the development of the most suitable conditions for obtaining the various fractions, and (2) to a determination of the characteristics of these fractions.

"Investigations of the effect of metallic catalysts and physical conditions on oxidative cleavage products produced in the autoxidation of polyunsaturated fatty acids, to provide basic information for applied research to develop new industrial chemicals from soybean and linseed oils." Experiment Station for the Italian Oil and Fat Industries, Milan.

Grant of 42,259,992 Italian lire, approximately equivalent to \$68,000, approved November 1960.

The autoxidation of the polyunsaturated fatty acids in soybean oil in the presence of metallic catalysts is capable of producing economic low-molecular weight chemicals that have large potential industrial applications. This project comprehends a study of the reaction of atmospheric oxygen with soybean and linseed oils, including identification and characterization of the resultant products and establishment of conditions for maximum yields. It has been under way for only a short time and no research results have yet been reported.

Studies of the admixture of soybean protein products with wheat flour in the manufacture of pasta (spaghetti, macaroni, etc.). National Institute of Nutrition, Rome.

Grant of 45,721,120 Italian lire, approximately equivalent to \$73,600, approved July 1960.

The research under this grant is being directed by Prof. Sabato Visco, director of the National Institute of Nutrition, who is an international authority in the field of food technology. He has been interested for several years in improving the nutritive value of Italian pasta which up to now has been made exclusively with wheat flour.

Wheat protein contains certain types of amino acids which contribute to its nutritive value, but the addition of soybean protein provides other amino acids which raise the nutritive value of the mixture to a much higher level. In preliminary experiments, Professor Visco has demonstrated that substantial quantities of soybean protein can be added to wheat flour in the manufacture of pasta without appreciably altering the texture or the taste of this product.

Your executive director, Mr. George M. Strayer, visited the National Institute of Nutrition in Rome about a year ago. I am sure that he will confirm my impression that Professor Visco is well equipped to carry out this study of the addition of soybean protein to Italian pasta. The grant was approved about a year ago but the start of the research was somewhat delayed and the first progress report has not yet been received.

**Poland.** "Investigation of the possible role of sterols in the development of flavors and odors in soybean oil through studies of sterol transformations during processing." Department of fat technology, Polytechnic Institute, Gdansk.

Grant of 592,400 Polish zlotys, approximately equivalent to \$10,800, approved July 1961.

In maintaining and expanding the food markets for soybeans and soybean oil, the problem of flavor stability of the oil is very important. Although the highly unsaturated acids in soybean oil are assumed to play a major role in producing undesirable flavors in this oil, it is believed that nonsaponifiable substances, such as the sterols, also may contribute to off-flavors. This grant provides for an investigation in the laboratory of the transformations undergone by the sterols in soybean oil during such processing operations as degumming, refining, bleaching and deodorization. The possible correlation of these changes with flavor and odor will be investigated. The research under this grant is just starting.

**Spain.** "Investigations of ion-exchange procedures for removing prooxidant metals from soybean oil." Institute of Fats and Their Derivatives, Seville.

Grant of 2,220,000 Spanish pesetas, approximately equivalent to \$36,500, approved March 1960.

Previous research at the Northern Regional Research Laboratory of the U. S. Department of Agriculture has shown that traces of iron and copper in soybean oil are a major factor in





reducing its flavor and oxidative stability during storage. The action of these trace metals can be blocked by the addition of citric acid or some other compounds, but the addition of such inactivators is not permitted in many foreign countries. Therefore funds have been made available for a program of research to determine whether ion-exchange procedures can be used to remove the deleterious trace metals.

This project has been under way for about a year and the institution has developed a resin formulation that seems to be reasonably effective in removing the pro-oxidant metals. The effectiveness is being checked by organoleptic tests of reversion in the treated oil samples conducted by a panel of tasters, and by various chemical tests to detect deterioration of the oil.

**United Kingdom.** "Development of new uses of soybean and linseed oils through investigations of organometallic derivatives and complexes as components of protective coatings having improved properties." Research Association of British Paint, Colour and Varnish Manufacturers, Paint Research Station, Teddington, England.

Grant of 32,442 British pounds, approximately equivalent to \$90,850, approved May 1960.

The research under this grant is based on evidence obtained in previous investigations that satisfactory coatings could be obtained through the use of organometallic compounds or complexes obtained from soybean or linseed oils. In order to exploit this development satisfactorily, it is necessary to obtain adequate basic information concerning the role of various metals in affecting the properties of protective coatings, and the relationship of organometallic compounds to reactions between pigments and vehicle and between paints and metal surfaces to which they are applied.

This research project has been under way for a relatively short time but several ethanalamides of oleic and linoleic acids have been prepared. These two acids are prominent constituents of soybean oil. The reaction of the ethanalamides with aluminum and titanium alkoxides is being explored and the reaction products are being evaluated in protective coatings.

"Fundamental studies on the reaction of sucrose with constituents of vegetable and animal fats and oils to produce new compounds having special hydrophilic and lipophilic characteristics." Tropical Products Institute, London, England.

Grant of 32,750 British pounds, approximately equivalent to \$91,850, approved June 1959.

The purpose of these studies is to prepare from sugar (chemically known as sucrose) and fatty derivatives new compounds of potential interest as surface active agents, such as detergents or emulsifiers. It has been demonstrated that sucrose stearate possesses appreciable surface activity but its use is restricted by its low solubility in water. Attention is being given to the preparation of derivatives of sucrose stearate that will have increased solubility and

hence wider applicability in detergents and emulsifiers.

"Investigation of the reactions of unsaturated fatty acids and their derivatives in molten alkali, to discover new chemical intermediates important to the increased utilization of soybean and linseed oils." Queen Mary College, University of London, London, England.

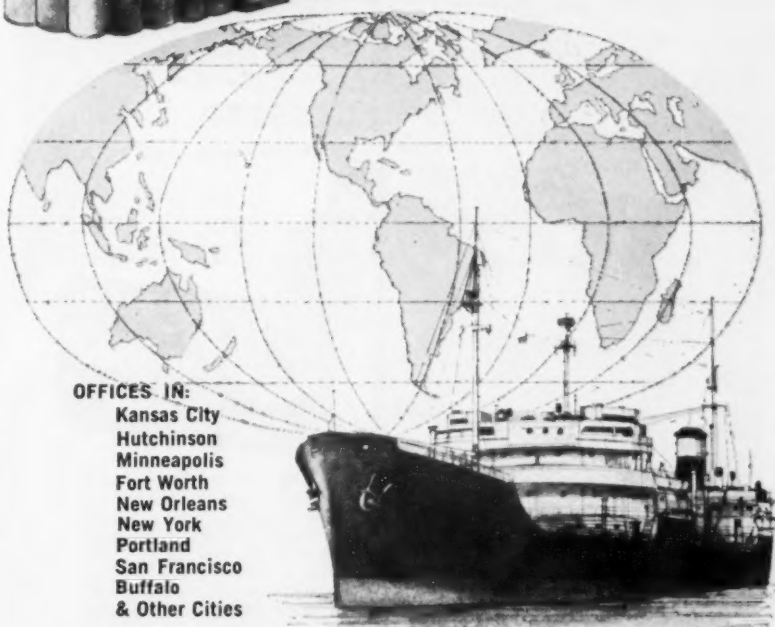
Grant of 11,970 British pounds, approximately equivalent to \$33,500, approved October 1960.

An investigation of the preparation of new fatty acid derivatives by the treatment of oleic and linoleic

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acids in molten alkali has been started recently under the direction of Prof. B. C. L. Weedon whose research ability has received international recognition. It is anticipated that if a clearer understanding of the mechanisms of the changes in these fatty acids in molten alkali is obtained, it should be possible to produce a number of potentially useful industrial products.

"Quantitative study of the polysaccharides in fat-free soybean meal to provide information needed to improve the processing of meal for foods and feeds." University of Edinburgh, Edinburgh, Scotland.

Grant of 18,240 British pounds approximately equivalent to \$51,100, approved December 1960.

This project is under the direction of Prof. E. L. Hirst, head of the department of chemistry, University of Edinburgh. Professor Hirst has received high recognition in chemical circles and is a past president of the Chemical Society (London). It is believed that basic studies of polysaccharides present in fat-free soybean meal should provide an insight into the changes that may occur in these substances as a result of processing the meal for feeds and foods. These studies will include polysac-

charides of the crude fiber, hemicelluloses, starches, dextrins, pentosans, galactans and pectin-like materials. Research on this project has just started.

#### Approved Contract

**Japan.** "Factory experiments on comparative brewing of shoyu (soy sauce) from U. S. soybeans and Japanese soybeans to provide data for the increased use of the U. S. beans." The Japan Shoyu Research Institute, Tokyo, Japan.

A contract providing for this project 3,097,550 Japanese yen, approximately equivalent to \$8,600, was approved by our office in June 1961. Studies under this contract will compare U. S. and Japanese soybeans for producing shoyu (soy sauce) at 11 plant locations in Japan. The criteria to be used in this comparison are (1) yield of sauce as related to the nitrogen content of soybeans and wheat used, and (2) flavor of the sauce as determined by competent taste panels.

#### Approved for Negotiation

**France.** "A chromatographic study of the sugars and oligosaccharides in soybeans to provide information needed to improve processing of fat-

free soybean meal for foods and feeds." Faculty of Sciences, University of Caen, Caen.

Note: This project was negotiated by the staff of our European office in June and a grant will be implemented as soon as possible.

**Israel.** "Investigations of complexes formed by soybean proteins with other meal constituents to provide information for expanded utilization of soybean oil meal." Weizmann Institute of Science, Rehovot.

"Development of miso-type feed product from soybeans by fermentation, as a contribution to the expansion of export markets for soybeans." Biochemical department, Hebrew University, Jerusalem.

"Effect of ethylene dibromide fumigated feed (including oilseeds and oil cakes) on animals." Faculty of Agriculture, Hebrew University, Rehovot, and the Agricultural Research Station, Beit Dagan.

Note: The above three projects were negotiated by the staff of our European office in June and grants will be implemented as soon as possible.

**Spain.** "Improvement of the frying qualities of soybean oil through studies of the influence of refining and other processing factors on surface tension, interfacial tension, viscosity and other physical properties concerned with its penetration into fried foods." University of Granada, Granada.

Note: This project will be negotiated by the staff of our European office on their next trip to Spain.

#### Under Consideration

The following proposals are being reviewed and evaluated by appropriate agencies of the U. S. Department of Agriculture. Some phase of soybean research is contemplated in each of these projects.

**Argentina.** "Addition of formic acid, lactic acid, etc. to the double bonds in the components of oilseeds (including soybeans)." Argentine Institute of Fats and Oils, Buenos Aires.

"Oilseed meals: composition: toxic components: biologically-active compounds; detoxification." Argentine Institute of Fats and Oils, Buenos Aires.

**Chile.** "Chemical composition of selected vegetable oils and the relationship between composition and nutritive and health properties, with emphasis on the role of the oils and their principal acids in atherosclerosis." University of Chile, School of Chemistry and Pharmacy, Santiago, Chile.



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**France.** "Comparative study of the atherogenic effect of a crude oil such as soybean oil, rich in essential fatty acids, and of the same oil refined and hydrogenated." Laboratory of Human Nutrition, National Institute of Hygiene, Paris.

"Effects of various food oils (crude, refined and hydrogenated soybean or corn oil) on the composition of plasma fats in the rat and in man." Institute for Research on Cancer, Villejuif-Seine, Paris.

"Study of the influence of the fatty acid composition of margarines on the composition of the bile in rats, dogs and humans." National Institute of Hygiene, Paris.

**India.** "Exploratory investigations of selected hydroxylated derivatives of soybean and linseed oils, to determine the feasibility of producing new industrial products from these oils." Regional Research Laboratory, Hyderabad.

**Israel.** "Development of rapid in-vivo tests for protein quality in oil-seed meals." Laboratory of Nutrition, Hadassah Medical School of the Hebrew University, Jerusalem.

"The influence of processing of vegetable oil cakes on their nutritive value for different kinds of farm animals and development of laboratory tests for their evaluation." The Hebrew University, Rehovot.

"The influence of packaging material and of added aldehyd scavengers on flavor retrogression in stored soybean oil." Israel Institute of Technology, Haifa.

"Investigations of the effect of processing conditions on the yield and quality of isolated soybean protein for use in Israeli-type foods, as a contribution to expanded utilization of soybeans." Israel Institute of Technology, Haifa.

"In-vitro and in-vivo evaluation of the nutritive value of mixtures of plant proteins containing soybean meals." Laboratory of Nutrition, Hadassah Medical School of the Hebrew University, Jerusalem.

**Japan.** "Evaluation of U. S. varieties of soybeans for making miso to increase their use in Japan." Central Miso Institute, Tokyo.

"Evaluation of U. S. soybeans as a material for frozen tofu." Food Research Institute, Ministry of Agriculture and Forestry, Tokyo.

"Evaluation of fermented soybean milk products." Food Research Institute, Ministry of Agriculture and Forestry, Tokyo.

"Study on the production method for highly stable soybean oil through slight hydrogenolysis." Japanese American Soybean Institute, Nagoya.

I hope this brief summary of the

significant role that soybean research plays in the foreign research program under U. S. Public Law 480 has been of interest. It should be emphasized that this research and, in fact, all of our P. L. 480 research is designed to be of mutual benefit to the farmers in the United States and to the consumers in the countries where the research projects are being conducted.

Furthermore, we have discovered an additional benefit resulting from the overall operation of our foreign research program. Progress reports are submitted periodically by each

of our foreign research grantees. These reports are reviewed by qualified scientists in the U. S. Department of Agriculture and comments are exchanged on details of the research. This leads to a better understanding between the scientists in our country and those in the countries throughout the world where our P. L. 480 research program is in operation. We have noted with pleasure the growth of a mutual respect which must surely contribute to better relations between the United States and the other countries concerned.



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# The European Common Market and U. S. Agriculture

By WALTER C. KLEIN

President, Bunge Corp., New York, N. Y.

**I** AM GLAD to discuss with you today a topic of mutual interest, the European Common Market . . . what it is, how it proposes to operate, the prospective effect on U. S.



foreign agricultural markets, and, finally, to suggest some of the steps we—you and I—may take to minimize the effect on our export markets for agricultural products.

The Common Market or, to give it its full name, the European Economic Community, is a union of six nations of Western Europe. They are: West Germany, France, Italy, Belgium, Holland and Luxemburg.

This union was founded by the Treaty of Rome in 1957, and became operative Jan. 1, 1958.

## Organization of the Common Market

Some words about the institutional setup of the EEC may be helpful in explaining how the Community operates.

First there is the Common Market Commission whose task it is to supervise the establishment of the whole Common Market. It is entrusted with working out and implementing common policies in many fields.

The Council of Ministers comes next. This is the only Community institution whose members are national representatives. This Council in most cases takes the final decisions, but it can only do so on proposals submitted by the Commission. The Council ensures coordination between the policies of the national governments and those of the Community as a whole.

Then there is the European Parliament whose members are elected by and from the legislatures of the member countries. Eventually they will be elected by universal suffrage. The Commission is obligated to report annually to the European Parliament which can on a motion of censure with two-thirds majority

vote fire the Commission. The Parliament must be consulted before certain specific decisions are taken.

Lastly, there is the Court of Justice to decide whether the acts of the Commission and the Council are valid. The Court's judgments have the supreme force of law throughout the Community and bind all individuals, firms, national governments and the Community Commissions themselves.

## Aims of the Common Market

The aims of the Community are to progressively bring together the economic policies of the six member states, to step up their whole economic productivity, and to achieve unrestricted movement of goods, capital and people among themselves. Of course, economic harmony cannot be totally divorced from political agreement, and in fact, political unity is envisaged by many in Europe as the ultimate destiny of the Common Market countries. As an illustration of current thinking, in the final communique issued at the Paris Conference on Feb. 10 and 11, 1961, of the heads of the State of Government and Foreign Ministers of the Six, the following appears:

"It was the purpose of the Conference to seek the methods by which closer political cooperation could be organized."

These aims, which would effectively strengthen the free world, are supported by the United States.

To achieve their aims toward harmonious economic development, the Common Market will be doing many things, and among these will be the establishing of a common agricultural policy, and this is where we are concerned today.

The objectives here are: higher agricultural productivity; higher farm income; stable markets, insulated from fluctuating world prices; regular supplies; fair prices to consumers.

To become effective, the Community's common agricultural policy will, of course, require approval of all six member states. Although all six have been traditionally protec-

tionist in agricultural matters, and all have a variety of quotas, tariffs, price supports, and other market intervention schemes, the actual domestic price levels and national policies are very different.

Therefore, they are having difficulty in finding a mutually acceptable agricultural policy.

Nevertheless, the Common Market Commission, whose job it is to make the recommendations, has come up with some concrete proposals.

These include measures for structural improvements in agriculture, such as land consolidation, loans, training programs, social aid enabling moves out of poor farmland and so on, and also market and price policies.

The market and price policies, of course, will have the greatest effect on us, and here the proposals are such that the United States, in spite of its general support of the Common Market, has had no choice but to declare them totally unacceptable.

The reasons for this are not only that the proposals, if adopted, could most seriously affect our agricultural exports to the area, but also that they are, in the United States' view, repugnant to the free trade principles of GATT (General Agreement on Tariffs and Trade). By eliminating competition and economic advantages of other nations, giving preference to their own production, even if uneconomic, they could cause incalculable harm to the entire concept of expansion of international commerce that has been so painstakingly built up over the last decade.

Generally speaking, the EEC Commission's proposals would seek to increase domestic production at fixed high prices under the protection of various import controls that would keep the price of imports always at or above the domestic prices. Over a period of up to 7 years, the domestic prices of the six nations would be brought together to common levels and in the meantime, import control measures would give preference to the members of the Six.

All this simply means that the

United States and other exporting countries would be relegated to positions of residual suppliers.

It is easy to see how serious this could be for us. The Common Market has been taking about \$1 billion of our agricultural exports annually. In fact, in calendar year 1960, those six countries took \$1,099,000,000 as follows:

West Germany .....	\$ 355,000,000
Holland .....	\$ 320,000,000
Italy .....	\$ 159,000,000
Belgium (incl. Luxembourg) .....	\$ 137,000,000
France .....	\$ 128,000,000
	<b>\$1,099,000,000</b>

This is almost one quarter of our total exports of farm goods, which last year amounted to \$4,824,000,000, and which in turn represents 1 acre of every 6 harvested in the United States.

Moreover, the farm goods sold to the Common Market are virtually all paid for in dollars and bring in approximately 5% of the total export revenues of the entire United States. With balance of payments deficits so much on everybody's mind these days, you will realize how important a market this is.

Adoption of the EEC Commission's proposals, it is feared, could ultimately cost us up to a quarter of a billion dollars of sales per year.

#### Proposals of the Common Market

Proposals have been made concerning wheat, coarse grains, sugar, milk and dairy products, beef, pork, poultry, eggs, tobacco, fruits, vegetables and wine. We are presently selling the Common Market a combined total of about \$450 million of these products annually.

I would like to review some of these proposals in the general categories in which they fall.

**Livestock products:** Common Market countries propose to protect their domestic production in three ways:

1—A fixed import tariff.

2—A variable import levy to compensate for the difference between the feed grain prices within the Community and feed grain prices on the world market.

3—An additional variable import duty to be applied in case the first two measures are not enough to protect the desired price level within the Community.

The most important to us in this group has been poultry. Out of total exports of \$57.2 million last year, we sold \$25 million to the Common Market. The effects of the proposals on these sales are extremely hard to judge, depending so much on the

price levels eventually adopted, and relationship of these prices to feed grain prices, but the proposals by themselves certainly provide the ground rules for reduction of imports.

**Wheat and feed grains:** Here it is necessary to go into the proposals in greater detail. After a transitional period ending June 30, 1967, it is proposed to have so-called "target" prices. These would be prices common throughout the Community, except for regional freight differences, that farmers are to receive.

Support purchases of wheat and feed grains would be made by a proposed European Grain Bureau, which would be compelled to buy all wheat and feed grains offered to it at prices 5% to 7% below the target prices.

In order to protect domestic production at these target prices, the proposals call for an entirely new concept of import controls—a variable import levy. This levy would be applied to wheat and feed grains in an amount equal to the difference between the "fixed target prices" ruling in the Community and the "fluctuating world market prices."

Furthermore, the European Grain Bureau would have the power to completely suspend all imports at any time in states of emergency. Presumably, they would invoke this power when they had been compelled to make large support purchases or when stockpiles were felt to be getting too high.

These measures were proposed to come into force for crop 1967-68, and steps toward making uniform prices and uniform import regulations by

means of a levy system for both inter-Community trade and trade with third countries were proposed to start with crop 1961-62, with preference being given by Common Market members to each other's merchandise. This levy system is certain to be instituted.

Although the proposals for wheat and feed grains are identical from the import control point of view, their likely effects on U. S. exports to the Common Market are different.

Considering first wheat, the Common Market, even when being a net exporter of soft wheat, has always been an importer of hard, good quality wheat, primarily due to climatic conditions. It is true that in recent years their wheat imports have been reduced mainly due to increased production, and it may be that eventually the support price for wheat will be set high enough to encourage a further expansion of production of hard wheat, but it would nevertheless appear that, for a good number of years at least, the Common Market will still have to import a fair quantity of hard wheat to mix with their domestic soft wheat to make a good flour.

However, the current EEC Commission's proposals visualize that the variable import levy for hard wheat will be the same as for soft wheat, and this could mean a stiff penalty to U. S. and Canadian hard wheat. As a result, we may be faced with a certain loss of market—a market to which the United States shipped 749,000 tons of wheat in calendar year 1960.

When we come to analyze the ef-

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fects of the Common Market proposals on feed grains, we have a drastically pessimistic picture. There is, within the Common Market area and especially in France, a large unused productive capacity for feed grains and, given the inducement of a high enough price, the Common Market can undoubtedly expand its production very substantially. The uniform price level to be attained by 1968 would almost certainly be more than high enough to induce expansion. In fact, the pressure to fix the common prices at or near the Ger-

man prices, which are the highest in the Community, seems to be heard more and more all the time.

If the proposals are adopted, it seems virtually certain that imports of feed grains into the Common Market will decline most drastically. They could drop by 50% and maybe much more in a relatively short number of years.

If we were to lose one-half of this market by adoption of the Common Market proposals, we would be losing upwards of 90 million bushels, the equivalent of 2,250,000 tons, of

business every year, and vital dollar-earning business, too.

**Fats and oils:** For fats and oils, we understand that some proposals will be set out by the Common Market Commission before long. Of course, not knowing what they will be, it is not possible to assess or even guess their likely impact on our sales. For your interest, however, let me mention that in 1960, out of our total exports of vegetable oils amounting to \$164 million, the EEC took \$42 million, about 25%, and out of our lard and tallow exports of \$173.5 million, they took \$46.3 million or 27%.

**Cotton:** I must mention too, even though no proposals are in the offing, that of our 1960 exports of cotton amounting to 7,500,000 bales (\$980 million) the Common Market took \$313 million or 32%.

**Soybeans:** Turning now to soybeans, which I know is your preponderant interest, I am glad to have some brighter words for you.

Fortunately, the outlook for soybeans is good. As a matter of fact, the EEC Commission has made no proposals for soybeans, presumably because they do not grow them, and there is every good chance for imports of soybeans into the Common Market to remain free. Here is how Common Market purchases of U. S. soybeans stood last year.

Netherlands .....	24,700,000
Belgium .....	5,200,000
France .....	3,800,000
West Germany .....	16,900,000
Italy .....	4,200,000

54,800,000 bushels

This total of 54.8 million bushels represents 37% of our total exports of 148 million bushels.

I would like to say more about soybean exports, outside of the specific relationship to the Common Market.

Exports of soybeans have enjoyed a miraculous expansion since the end of the war. In the past 10 years, in fact, soybean exports have quintupled.

Our main customers are Western Europe and Japan where the promotional endeavors of the Soybean Council of America have met with astounding success, facilitated, of course, by those countries' ability to pay.

It is also interesting to note that there has been no soybean problem at home in the sense that we have a wheat problem, or a corn problem, or a sorghum problem with the price support programs resulting in the stimulation of uneconomical production, which in turn has brought us unmanageable surpluses and contin-

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ually more and more government controls over farmers.

Price support for soybeans until now has been at a level which did not encourage uneconomical production. It merely provided a cushion which in fact was not often used during the harvest run.

Another plus in the soybean picture has been the quality. We have had problems of crotalaria, but these have been substantially eliminated by new procedures in the Grain Standards under which soybeans containing crotalaria are graded sample grade. We have also had problems with foreign material and we do wish that soybeans would be made available, as we know is possible, with lower f.m.

On the whole, however, the quality of our soybeans is consistently good and since the customers abroad have become fully familiar with our grading standards it is true to say that quality is not the problem as far as soybeans are concerned.

Soybeans are a bright spot on the American agricultural scene. There may be some relationship between this fact and the relative absence of government involvement. Without question, however, the Soybean Council has made a brilliant contribution to the health of the soybean market, and I know your efforts will continue fruitful.

I would now like to mention the so-called merger of the EEC and the European Free Trade Association, also called the Outer Seven.

As I am sure you all know from the press, Prime Minister Harold Macmillan announced at the end of July that Britain would seek membership in the Common Market.

Britain has in fact been the leader of the European Free Trade Association, whose other members are Norway, Sweden, Denmark, Austria, Switzerland and Portugal.

This group, which was created in a sense as an economic counter to the EEC, has found itself faced with the likelihood of drifting further and further away from normal trade relationships with the Common Market countries. This division, which would no doubt become aggravated as the Common Market internal duties approach zero, would have most undesirable effects not only economically, but also politically for the whole of Western Europe.

For some time, therefore, both sides have been giving consideration to measures that would prevent these difficulties.

It was not easy, however, for Great Britain to take the decision to join

the Common Market. Full membership in the Common Market, of course, means falling into line with the EEC's customs union, which would not allow for continuation of the traditional commonwealth customs preference.

Another problem concerns British agriculture where farmers are heavily subsidized, and the British National Farmers Union is against accession to EEC.

Despite these problems Mr. Macmillan has considered it in Britain's best interest to apply for membership in the Common Market.

The other members of the EFTA, especially Norway, Denmark and Austria, are relieved that Britain has taken this step and will themselves seek membership. Portugal presumably will do the same.

The Swiss and the Swedes, in consideration of their traditional political neutrality and independence, will probably not be too keen on joining the Common Market as full members and some kind of association is as far as they will likely be interested in going. It seems almost a certainty, however, that as the years go by practically the whole of Western Europe will unite as a single economic bloc and furthermore, even though it may take still longer, as a

united political force. In terms of world balances of power the United States strongly supports this arrangement.

In terms of our trading with Western Europe, however, we are going to find the competition increasingly difficult in industrial and manufactured articles. For agricultural products everything depends on the price levels that are eventually adopted. For those agricultural products that Western Europe is able to produce itself we may well have to face a most drastic curtailment of our sales.

### What We Can Do

Now the question arises, what can be done to protect the interests of American agriculture against the Common Market proposals which look particularly bad for us in feed grains.

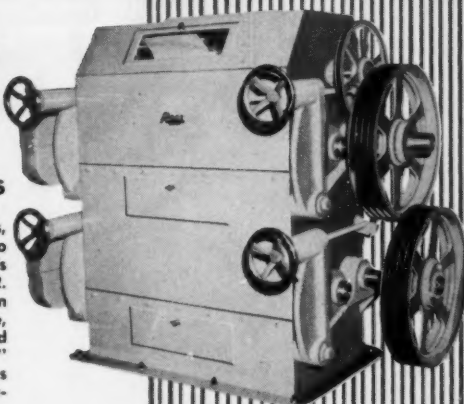
First, these problems have been under discussion in Geneva, where the member nations of GATT (General Agreement on Tariffs and Trade) meet together. The proposals of a variable import levy designed to discriminate against outside production are repugnant to the principles of GATT and U. S. delegates and delegates of other agricultural exporting nations protest very strongly.

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In his address to the opening session of GATT on Sept. 1, Clarence Randall, special assistant to the President of the United States, came right to grips with the subject. He said, "No matter how well we may resolve the problems in other fields, we cannot reach a satisfactory overall result unless at the same time those questions that relate to agriculture are dealt with in accordance with GATT principles."

Perhaps the official position of the United States towards the EEC's agricultural policy can best be expressed by the following quotation from the Communiqué issued after the meeting at the White House on May 16, 1961, between President Kennedy and Dr. Walter Hallstein, president of the Common Market Commission:

"The President and Dr. Hallstein discussed the current state of relations between the United States and the European Economic Community. The President took the occasion to reiterate the interest of the United States in the preliminary discussions now under way looking toward the establishment of a common agricultural policy within the European Economic Community. While fully endorsing the establishment of a com-

mon agricultural policy as an essential prerequisite of the implementation of the Rome Treaty, the President expressed the hope that a common agricultural policy would take into account the importance of agricultural commodities in the overall pattern of free world trade and the interest of the United States and other agricultural exporting countries."

It is heartening that our government is so keenly aware of the problem and has so clearly gone on record against the Common Market proposals for agriculture detrimental to us.

So far as my company is concerned, it is never our policy to clamor for or against any domestic legislation, but in the matter of the Common Market, the Bunge Corp. feels that it can properly take a stand. We are completely against the outrageously discriminatory variable import levy proposals; in fact, we are completely against any scheme that will serve to curtail the export sales of American farm products.

I am sure that the government would welcome an expression of your support even though sales of your soybeans appear in no immediate jeopardy. Also, through your

membership, you can let your senators and congressmen know how you feel about the matter.

In conclusion, may I say that it is very pleasing that the subject on which I have spoken is one where our interests are so closely allied. I hope that this talk will have helped to point up the importance of cooperation between us. Certainly we must all—farmer, exporter, government, and others interested in agriculture—pull together in every possible endeavor to keep open our traditional markets of Western Europe.

## Porter Joins Tabor & Co. at Decatur

David Porter has joined Tabor & Co., grain merchandisers and investment bankers in Decatur, Ill.



David Porter

Mr. Porter comes to Tabor from the United Grain Co., Peoria, Ill., where he worked for a total of 2 years before and after his tour of duty in the Air Force. He has a BS degree from the University of Illinois College of Agriculture.



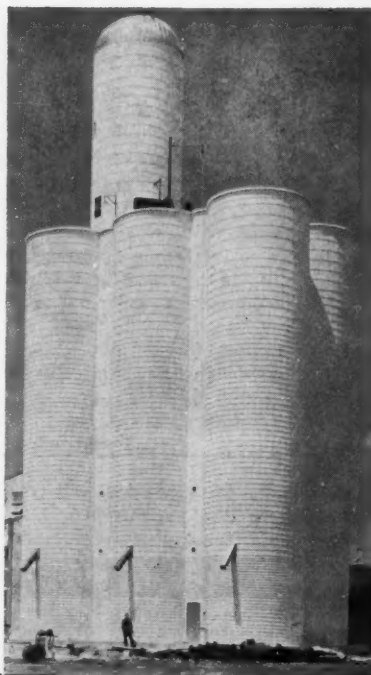
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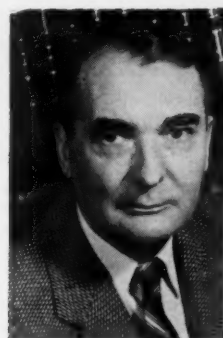
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# Grower Financing of Market Development Programs

By **CLIFFORD R. HOPE**

President, Great Plains Wheat, Inc.,  
Garden City, Kans.



**THE STORY OF** American agriculture, especially in the last few decades, has many interesting aspects, none more interesting and thrilling than the rise of the soybean as one of our major crops. However, I was not asked to come here to talk about soybeans. Specifically, I have been asked to tell you about the program which wheat growers are using in the field of market development.

As most of you know, our market development program is financed as far as dollar costs are concerned by a small tax on the first marketing of wheat in the states in which we operate. The idea, of course, is not new. It operates on a national scale in the case of wool. It is in effect in some states on such important commodities as potatoes and citrus fruits and on a number of minor crops. In another form, it is in effect on livestock under the program of the National Livestock and Meat Board.

Although among the largest commodity groups in agriculture, wheat growers were one of the latest to organize. Very little along this line was done until the late 1940's and the early 1950's. Oregon, although not a large wheat producing state, was the exception to this rule. Its progressive growers organized the Oregon Wheat League as far back as 1926, and in 1947 they persuaded the legislature to set up a state wheat commission and levy a tax to support a market development program.

As already noted, wheat growers in several Great Plains States perfected growers organizations beginning in the late 1940's, and in 1951 the National Association of Wheat Growers was organized. At present its membership consists of growers organizations in the following states: Colorado, Idaho, Kansas, Nebraska, Oklahoma, Oregon, South Dakota, Texas, Washington, and Wyoming.

State wheat growers organizations have been the most effective instrumentalities in the establishment of

state wheat commissions, although in many states effective support has been given by other farm organizations. North Dakota is the only state with a commission which does not have a wheat growers organization. There is an active organization of durum growers, however. In some states, farm organizations have opposed wheat commissions, and at least two states, Oklahoma and Montana, contributed to the defeat of legislation during the present year.

## State Wheat Commissions

At present, the following states have wheat commissions:

In order of their establishment, they are Oregon 1947, Nebraska 1955, Kansas 1957, Colorado 1958, Washington 1958, Idaho 1959, North Dakota 1959, South Dakota 1961. Six of these commissions were established by direct act of the legislature. Two, those of Colorado and Washington, were set up under already existing legislation authorizing producers of agricultural commodities to organize market development groups under the supervision of the state commissioner of agriculture. In the case of Washington, the constitutionality of the law and validity of the action under which the commission was organized have been attacked in the courts. That action is still pending. The last session of the legislature passed a direct act to go into effect if the action against the present commission is successful.

In the case of commissions established by direct act, the rate of tax is fixed in the law. In the case of Colorado, the commission (Colorado Wheat Administrative Committee) fixes the amount of the tax. I think this is true in Washington also.

Rates of taxation vary from state to state. If there is any pattern, it is that the smaller the production of wheat, the higher the tax. Rates are as follows: Oregon and Idaho, 5 mills per bushel; Colorado, 4 mills; South Dakota, 3 mills; Nebraska and Washington, 2½ mills; North Dakota and Kansas, 2 mills.

Three states—Kansas, North Dakota, and South Dakota—provide that on making application, the producer may receive a refund of the tax paid. The South Dakota law has not been in effect long enough to tell, but general satisfaction with the law and the tax in Kansas and North Dakota is indicated by the fact that refund applications have amounted to only 1%, both in number and volume.

Methods of selecting commission members vary. In Oregon, Nebraska, Idaho, Kansas, and South Dakota, commission members are appointed by the governor, the length of terms being 2 years in Kansas, 3 years in South Dakota, and 5 years in Oregon, Idaho, and Nebraska. The original appointments in all cases are for staggered terms. In the case of North Dakota, the original appointments were made by the governor for staggered terms; thereafter as terms expire, the new members are elected indirectly by the wheat producers for 6 years.

In Colorado and Washington, the commission members (in Colorado, the state wheat administrative committee) are elected by the growers, in the case of Colorado indirectly. The Colorado term is 1 year. Washington commission members serve 3 years with staggered terms. Five are elected by producers, two are elected by the five.

I cannot give you an exact statement of the powers and authority of the various state wheat commissions, but in a general way they are similar to the powers contained in the Kansas Wheat Act which are as follows:

"Sec. 6. In the administration of this act the commission shall have the following duties, authorities and powers: (1) To conduct a campaign of development, education and publicity; (2) to find new markets for wheat and wheat products; (3) to accept grants and donations; (4) to sue and be sued; (5) to enter into such contracts as may be necessary or advisable for the purpose of this act; (6) to appoint an administrator and such other personnel as is needed, and to prescribe their duties and fix their compensation and the said administrator and employees of the commission shall be in the unclassified service of the Kansas civil service act; (7) to cooperate with any local, state or national organization or agency, whether voluntary



or created by the law of any state or by national law, engaged in work or activities similar to the work and activities of the commission, and to enter into contracts and agreements with such organizations or agencies for carrying on a joint campaign of development, education and publicity; (8) to establish an office of the administrator at any place in this state the commission may select; (9) to prosecute in the name of the state of Kansas any suit or action for the collection of the tax or assessment herein provided; and (10) to adopt, rescind, modify and amend all necessary and proper orders, resolutions and regulations for the procedure and exercise of its powers and the performance of its duties, and all rules and regulations shall be filed in the office of the revisor of statutes as provided in article 4 of chapter 77 of the General Statutes of 1949."

The organization of state wheat commissions has been followed by the organization of two regional groups. One is Western Wheat Associates composed of the wheat commissions and grower organizations of Oregon, Washington, and Idaho. Its headquarters are in Portland, Ore. An office is also maintained in Washington, D. C. Joint offices with Great Plains Wheat are maintained in Tokyo, Manila, New Delhi and Karachi.

Great Plains Wheat, Inc., chartered as a nonprofit corporation, began business on Jan. 1, 1959, when its home office at Garden City, Kans., was opened. A Washington office was established at approximately the same time. Shortly thereafter, regional offices were opened in Rotterdam, Holland; and Lima, Peru. Later we began operations in the Caribbean area working out of the Washington office. Within the last few months, we have opened up the rapidly developing continent of Africa to market development activities, and within the next few months will establish an office in Rome to serv-

ice the area. This will include the Near East also.

In the meantime, as already stated, we have established a joint operation with Western Wheat Associates in the vast consuming areas of Asia with offices in Tokyo, Manila, New Delhi and Karachi. Under this arrangement, Western Wheat Associates assumes administrative responsibility for the operation of the offices. Expenses are shared equally by the two organizations and questions of policy are resolved by a coordinating committee which meets quarterly, composed of members from each organization.

Great Plains Wheat was established by the wheat commissions of Kansas and Nebraska, the wheat growers associations of the two states, and the Colorado Wheat Administrative Committee. On July 1, 1960, the North Dakota State Wheat Commission came into the organization so that at the present time the wheat growers of four states are represented in our membership. The board of directors is composed of 15 members, seven from Kansas, four from North Dakota, three from Nebraska, and two from Colorado.

Contributions to the cost of operating the organization are shared by wheat growers of the four states roughly in proportion to the amount of wheat produced during the previous 10-year period, averaged in with the last year. Directors are appointed as far as possible on the same basis.

The first three states which came into the organization contributed a

revolving fund totaling \$50,000. Current expenditures are made from this fund, and at the end of each month, the four states are billed for these expenditures.

Fiscal control is exercised by the board of directors which approves an annual budget. This budget in turn is approved and agreed to by the organizations in each state which are represented on the board. In each state, our billings are audited in the same manner as expenditures made by the state wheat commissions.

The proportion of the total funds collected by each state which goes to Great Plains Wheat varies with the states, but so far the average amount received by Great Plains Wheat has been somewhat less than half of that collected by the states. The remainder goes into administrative expenditures by state commissions, reserves against poor crop years which will lower receipts, and research, promotion, and public relations activities conducted by the states directly or by contract. In Kansas, the law requires that 20% of the tax collected go into the general fund of the state. No other state has such a provision.

### Associate Memberships

Because of our desire to keep in close touch with wheat growers in all the Plains States, Great Plains Wheat has set up a system of associate memberships. At present, the Montana Grain Growers Association, South Dakota Wheat Producers, Inc., the Colorado Wheat Growers Association, and the Oklahoma Wheat Growers Association are associate members. As such, each has a non-voting representative on the board of directors who attends board meetings and participates in every way except voting. This is probably the proper place to say that in due time, we anticipate a request for full membership in Great Plains Wheat from the recently established South Dakota Wheat Commission.

When our organization was set up, our projected activities were divided into six categories, as follows: foreign marketing, domestic marketing, public relations, transportation rates and facilities, utilization and new uses, and economic studies. Advisory committees were set up for each category. In general, this committee system has worked well. In addition, there is a policy committee to advise on general organization policies. A budget committee prepares and submits a budget to the board of directors each year. Special committees

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have been set up from time to time.

Most important of all is the executive committee composed of two members from each state who must also be members of the board of directors. This committee meets regularly six times a year and does a great deal of work which otherwise would have to be considered by the board of directors. The board meets regularly only three times a year.

Perhaps as I related to you the details of our organizational setup, it reminded you somewhat of the structure and relationships of our state and federal governments. There is this resemblance, and as the Great Plains organization has developed we have had some of the same problems that arose between the states and the federal government during the early days of our country's existence. I am happy to report, however, that in spite of actual and theoretical possibilities for misunderstandings, our system has worked well. In a large part, this can be attributed to the good common sense, loyalty and dedication to their job of the able men who serve on the board of directors.

This is perhaps the place to say something about the value of a producer operated market development program. As far as I know, Great

Plains Wheat and Western Wheat Associates are the only strictly producer organizations engaged in market development. I know there are many successful market development organizations which are composed of both producer and distributor elements. I know I don't have to say that to this group because at the very top of the list of such organizations is the Soybean Council of America with a marvelous record of successful market development activities.

However, while all elements of an industry have to work together if market expansion is to be successful, I think there are good reasons for believing that producers can do their part more effectively if they operate separately on their own funds and as their interests may dictate. This is the pattern which is followed successfully by industry no matter whether the product is automobiles or toothpaste. This is because the producer is the man who is primarily interested in volume and in new markets.

But more than that, market development must have its beginning right in the factory and on the farm. The producer must come up with a product which meets the changing demands of consumers. And they can

do this effectively only if they are fully informed as to what those demands are. There is no better illustration of this than the revolution which has taken place in the marketing of wheat. Formerly it was sold on the basis of appearance—today it is sold in this country entirely on the basis of its milling and baking value as disclosed by laboratory analyses.

Soybean producers, of course, are intensely interested in market expansion and development and have done a wonderful job. I cannot tell you anything you do not already know with respect to general market development activities. However, Mr. Strayer, in his letter to me, indicated that you might be interested in what we are doing in our field.

Let me give you a few highlights on that. First, I might point out that until very recently no organized effort had ever been made to produce wheat for export in this country. We produced for domestic use, and if there was any left over it was exported provided anyone wanted to buy it. In the meantime, our good neighbor to the north with a small domestic demand for its large actual and potential wheat production, geared its production to meet the de-

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mands of the world market and did a wonderful job.

When our organization came into existence, we decided our first job was to secure information as to market demands and needs in foreign countries. We first sent out teams composed of growers and in some cases growers and members of the grain trade. Based on the information secured in that way, and after consultation with Foreign Agricultural Service, we set up regional offices.

In order to settle the conflicting reports as to how our wheat exports compared with those from other exporting countries, we set up sampling projects in Western Europe and South America. The reports on this program are just about completed and when released will show that in many cases our wheat has not compared too favorably with that from other exporting countries. This is not flattering, but it is well to know the truth because that is the first step toward improvement.

We have sent cereal chemists like Roy Durham and Jim Doty to foreign countries to work with millers and bakers to ascertain their needs and requirements. We have worked closely with Foreign Agricultural Service and Agricultural Marketing Service in these matters and have had the inestimable benefit of the expert advice and suggestions of their able personnel.

We established the position of grain trade representative in our Rotterdam office and filled it with

Henning Vontillius, a man with European antecedents, who had a number of years experience in the export grain trade in this country. His principal job which he does well is to establish and maintain contacts with the Western European grain and milling trade, with a view of ascertaining their requirement with respect to wheat imports. He follows this up with trips to this country when he reports his observations and conclusions to the U. S. grain trade.

In the fall of 1960, we sent a team composed of five well-known and respected members of the U. S. grain trade to Europe for the purpose of having them spend 3 weeks studying grain trade operations in most of the leading business centers in that area. Their itinerary was arranged by Henning Vontillius who accompanied the group during the entire tour. This team brought back information which could not have been secured in any other way and which was helpful to both Great Plains Wheat and the grain trade in this country.

A little later we sent a similar team from the spring wheat area to Latin America. This trip was also very helpful from the standpoint of information gained.

On Sept. 30, we are sending another grain trade team to Europe. This team is composed of leading members of the trade, partly from the spring wheat and partly from the winter wheat sections. This team will travel with Mr. Vontillius and we look forward to having their obser-

vations and conclusions on their return.

Since its organization, Great Plains Wheat has been host to 20 official wheat teams from every quarter of the globe. These teams are composed of government officials, grain dealers, millers, bakers, and in one or two instances consumer and labor. We have brought them here not only to see what we have to sell but also to get from them suggestions and ideas as to what can be done to improve our marketing processes and the quality of our product. We feel our efforts in this respect have been highly successful.

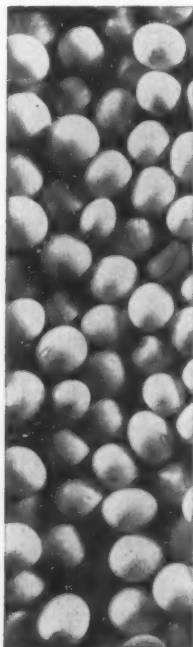
In addition to regularly scheduled teams, Great Plains Wheat has been host to many other foreign groups who came to this country on their own initiative or through the activity of U. S. government agencies. In many cases, these groups were interested directly or indirectly in U. S. wheat.

In the field of promotion, we have many projects including participation in trade fairs, trade luncheons, furnishing wheat samples, publications in English and several foreign languages, movies with sound tracks in English and foreign languages, nutrition education through use of press, radio, television, and nutrition buses, schools for bakers, participation in school lunch programs, and technical missions.

#### Transportation Rates

One of the greatest handicaps suffered by Great Plains wheat growers in the past has been high transportation rates, especially as compared with our principal competitors, Canada and Argentina. For that reason, much effort has been devoted to this subject. Wheat export rates to the West Coast from western Kansas, western Nebraska, and Colorado have been reduced from 98½¢ to 70¢ per hundred. Rates to the Gulf have been reduced sharply. Further activities in this field have included opposition to certain railroad mergers which it is believed if consummated will reduce competition.

Our activities in the field of economic studies have included sponsoring a Great Plains Economic Conference in Denver in July 1959, attended by economists from all land grant colleges in the Great Plains area and others; establishment of a Wheat Reference Bureau at Kansas State University; a comprehensive study of export subsidies by the Denver Research Institute, and the employment of Dr. Leonard Schruben as economic advisor for 1 year. Dr.



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Schruben's contract is completed, but he is available for specific assignments when needed.

New uses and products have occupied a considerable amount of attention. A large part of this activity has been in connection with state wheat commissions and growers associations. The Kansas Wheat Commission, working with the Department of Agriculture laboratory at Albany, Calif., has developed a new canned wheat product known as Redi-Wheat. This product has had a good reception where it has been made available to the public, but it is still too early to definitely determine its full commercial possibilities.

In the course of our foreign marketing activities, we are doing considerable in the use of bulgur, especially in rice eating countries. School lunch programs afford excellent opportunities for this type of activity.

At present, we are working with the Nebraska Wheat Commission in an advisory way in research activities in connection with better wheat utilization for food, feed, and industrial purposes. Of especial interest are research projects for new uses for wheat as human food for the export market. Industrial uses are receiving attention through contacts with the Regional Department of Agriculture laboratory at Peoria, Ill. We do not expect spectacular results in this field but feel there are possibilities for special products.

We have a very active information and public relations division directed particularly to keeping wheat growers, the grain trade, millers, bakers, the press and other informational media in touch with our activities.

Through our Washington office, we are in constant touch with officials of the Department of Agriculture and other government agencies with whom we work closely on foreign market development activities under the provisions of Public Law 480. While we are not a lobbying organization, our Washington office follows all legislative proposals affecting market development activities.

The foundation for any program such as we have undertaken must be an understanding of the problems which confront us. Many of these problems are largely beyond our control except as they may be worked out through intervention by governments at international conferences. I refer to such things as trade barriers of all kinds, and I suppose no commodity in international trade has as many such problems as wheat. Wheat is grown and consumed in almost every country

in the world, and for military, economic, and political reasons, most countries have adopted extremely strong protectionist policies. Our principal weapon in this field is through the efforts on the part of our government through GATT. We realize the European Common Market organization poses problems as far as agricultural exports to Western Europe are concerned.

State trading in wheat which is almost a worldwide phenomenon is another obstacle to progress in market development.

The fact that all wheat exported from the United States must carry

an export subsidy makes government subsidy policies of the utmost importance.

These are some and only some of the problems which are beyond our direct control, except as the policies of our own government may help solve them. But we are making progress even in this field.

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ened and progressive policies followed for many years by both government and farmers. Research and education, largely on the part of state and federal governments in the fields of improved practices, eradication and control of plant and animal diseases, better varieties of crops and strains of livestock, have played a great part. Our system of farm credit—private, cooperative and government—has made an important contribution. Soil and water conservation has been important. Mechanization, and its acceptance by farmers,

has been a big factor. What we have seen in the last few years has been spectacular, but it is the natural and to-be-expected result of 50 years of research and education.

Where we have failed has been in not making an equal effort in the field of marketing and distribution. That is where we must concentrate now.

Any survey of the situation will readily indicate that in the main, these markets are abroad. This doesn't mean we should neglect the home market. It can and will absorb

more. But in the world around us, there is a need for everything we can produce. And through the enactment of P. L. 480 with its market development provisions, we have the vehicle which can be used to put our products in the hands of people who need them.

Our first and principal effort should be to sell through normal channels of trade. But that is not enough. In addition, we must make full use of the special programs possible under P. L. 480 and the Mutual Assistance Act to see that our so-called surpluses are put to the use which God intended.

And while it is the job of those like Mr. Klein to carry out the actual handling and marketing of commodities, there is a place and a big place for the producer of farm products to develop a market for those products, just as the automobile and toothpaste manufacturers develop markets for theirs.

The productive power of American agriculture can only be maintained if there are markets for its products. Already it has been necessary to put restrictions on production into effect, and unless we redouble our efforts in the field of marketing, more will be necessary.

How often have we heard the remark, "Why don't farmers do more to help themselves?" While these remarks usually come from people who don't have the slightest idea of what they are talking about, yet they do constitute a challenge to farmers which should not be ignored. And from where I am looking, my friends, market development on the part of farmers is the best and most effective answer to that challenge.



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RADIOACTIVE fallout cannot be removed efficiently from farm land by the harvesting of crops, according to experiments performed by the U. S. Department of Agriculture's Research Center at Beltsville, Md.

Soil Scientists R. G. Menzel and H. Roberts, Jr., and Agricultural Engineer P. E. James said harvesting removed only about one-fourth of simulated fallout that had been applied to crops growing on isolated field plots.

Plots were planted with soybeans, representative of broadleaved plants, and dusted with simulated fallout before the crops were harvested. Rye, a grain-bearing grass, was used in a similar experiment.

# Soybean and Product Prices For the 1961 Crop

By T. A. HIERONYMUS

Professor, Agricultural Marketing,  
University of Illinois, Urbana, Ill.



**B**EFORE BEGINNING these comments, I want to make it clear that they are always subject to change. Forecasting a price when all of the factors are known is, at best, a hazardous thing. But at this time, all of the factors are not known. Changes in one or more can drastically alter outlook.

There can, and usually are, changes in the estimates of the crop size. The estimates can finally be in error. For example, during the first three quarters of the 1960-61 season, there was an unexplained disappearance of 28 million bushels. We will probably find 10 million or so of these "lost" soybeans during the last quarter, but it now appears that last year's crop will finally prove to have been rather badly overestimated.

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The production of competing crops is a major factor in soybean prices. During November and December of last year, it became apparent that Chinese soybean production was severely reduced which, together with failures of other crops, essentially removed China from the export market. This importantly changed the summer outlook.

Governmental policies and programs change somewhat capriciously and these are of importance in price outlook.

Finally, issues of war and peace are major factors. In forecasting prices at this time, we must make assumptions about the course of events in Berlin and other trouble spots in the world. For purposes of this discussion, I choose to assume that matters will continue much as they now are—tense but no worse.

The point of mentioning these things is to make it clear that this statement is good for today only. My purpose is to review the major factors involved in the outlook that may help you in forming price expectations as the year progresses rather

than to develop a final forecast that will stand up all season.

**Soybean supply.** For working purposes at this time, I think that I shall place the total soybean supply at 700 million bushels. This implies a larger production than the Aug. 1 estimate of 683 million. Right now the total supply is uncertain. Changes in crop conditions after Aug. 1 sometimes result in as much as 2 bushels per acre changes in yields. Never has the crop looked better on Aug. 1. One might think that the only way that the crop could go is backward; however, in years in which yields are high they tend to be underestimated on Aug. 1. Very bad weather in September will be needed to reduce yields from current estimates.

The Crop Reporting Service has an unusually difficult job in estimating acreage this year. The feed-grain program caused large acreage shifts and so makes the estimates more than usually subject to error.

In the Cornbelt, there was an effort on the part of farmers who are participating in a feed grain program to maintain total acreage of corn and soybeans at as high levels as possible. The program worked out so that some farmers could both comply and plant as many total acres of the two crops as they did in 1960.

There is certainly a functional relationship between the decrease in corn acreage and the increase in soybean acreage. I note that the increase in soybean acres in Iowa is .43 times as large as the decrease in corn acreage. In Illinois it was .32 times as large. Other Cornbelt states were generally less so that the average for the six states of Ohio, Indiana, Illinois, Missouri, Iowa, and Minnesota was .315. Now, if we increase the six-state average to the Iowa amount, we get a total of soybeans for harvest in the United States of 28 million acres. At 25 bushels per acre, this is a production of 700 million.

The carryover will be reduced to nominal levels of 5 to 10 million bushels.

These are the considerations that lead me to use a total supply of 700 million bushels at this time.

**The price of soybeans.** There is no serious likelihood of needing so many soybeans. A 25% increase in supply is more than the market can absorb in 1 year. This is particularly true at a price support based on \$2.30 per bushel. It seems perfectly clear that there will be a substantial carryover of soybeans on Oct. 1, 1962. With the U. S. government so ready, willing, and able, it also seems perfectly clear that the bulk of the carryover will be in the hands of CCC. They stand ready to accumulate at \$2.30, basis No. 2 soybeans, and \$2.36, basis No. 1. These prices, minus the price of storage set a minimum on the price of soybeans. CCC also stands ready to sell at \$2.46½ and \$2.52½, respectively. This establishes the maximum price once CCC gathers up an inventory next May 31. This maximum price can only be reached if enough soybeans are forfeited under the loan that users have to turn to CCC for sup-

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plies next summer. And this can only happen if prices are below the loan next spring.

The price of soybeans is now in the hands of the government. All that is left to talk about is the price of the products and seasonal variation in soybean prices.

**The price of the products.** The prices of the products have to aggregate enough to hold soybeans out of the loan, to pull them out of the loan, and perhaps finally to pull them out of CCC inventory.

The loan at Illinois points for No. 1 soybeans is \$2.42 per bushel. To this we must add an amount that will encourage processors to crush in large volume. I think that 20¢ will do the job. This means that, basis 11 pounds of oil and 47 pounds of meal, the product value must total \$2.62.

In deciding how much for each, the key factor is the tolerance that the USDA has for a carryover of soybeans. Their level of tolerance of a carryover will establish the amount of soybeans that will be processed into oil and meal. Meal will move into consumption at whatever price it will fetch; it is very difficult to do anything about the price of meal, primarily because it does not store well. The price of oil will be manipulated to obtain whatever level of crush is necessary to reduce the carryover to the desired level.

This Administration, the USDA, will contend that a reserve carryover of soybeans is desirable. It can also be expected to take whatever action is necessary to avoid the accumulation of a "surplus" of soybeans. The devices for increasing the use of soybeans are in the oil area. They include the familiar P. L. 480 and charitable donation programs. It may be possible to enlarge these. More programs can be added if necessary. The first that occurs to me is to make long-term contracts to supply oil under P. L. 480 and to

immediately accumulate oil against such commitments. This could amount to an oil-buying program this year. The essential point is that oil prices can and probably will be put to whatever levels are necessary to generate a crush large enough to avoid a soybean "surplus."

The key question is the line that divides a "reasonable reserve" from a "surplus." To identify the amount that falls on this line is an exercise in reading the mind of the Administration. It is all the more difficult because that mind is probably not yet made up. But, a number has to be put on it and so I will say 50 million. I use 50 million because when we got up to 62 million 2 years ago the support price of soybeans was reduced. If it was necessary to reduce the support price, there must have been a surplus. Fifty million is the next smallest number and is less than 10% of the crop. It seems an amount that might easily be considered a "reasonable reserve."

The carryover on Oct. 1, 1962, then will be 50 million plus pipeline stocks of 5 to 10 million. We will use about 35 million for seed and waste, leaving about 655 million for export and crush.

**Exports.** Exports during the current year are at approximately year-ago levels. The total for 1959-60 was 142 million. Because of the premium of old-crop soybean prices at the present time and the unusually large August-September shipments last year, I expect the total for 1960-61 to be about 135 million bushels.

A simple projection of the trend of soybean exports during recent years indicates 150 to 155 million during 1961-62. This method has worked fairly satisfactorily in recent years.

Because of automatic approval of soybean imports into Japan, I expect an increase of 5 to 7 million during the year ahead. The Canadian take should increase by 2 or 3 million.

Exports to Europe tend to be a residual of the availability of other oilseeds for crushing subtracted from the European requirements. As I do this exercise, I arrive at an increase in exports to Europe of about 10 million bushels. These three, Japan, Canada, and Europe, total an increase of 20 million, or 155 million bushels for the 1961-62 season. This is an amount consistent with the trend of exports in recent years.

**Crush.** If the supply is 700 million, the carryover 55 to 60 million, seed and waste 35 million, and exports are 155 million, then the crush becomes about 450 million. This compares with a crush during the current year of about 405 million. It is an increase of 10%. This is not a large increase. The crush capacity is large enough and increases in crush on the order of 45 million bushels have occurred before.

**Meal.** Before discussing the price of meal, I would like to cite a reference. An article of mine entitled "Forecasting Soybean Meal Futures Prices," appeared in the Commodity Yearbook for 1961. It contains a much more detailed discussion of method than I can include here.

Three factors are dominant in determining the annual average price of meal. These are the supply of soybean meal, the number of soybean meal consuming animal units, and the index of livestock and livestock product prices.

We have already established the supply at 10,002 million tons from a crush of 450 million bushels.

Regarding the number of soybean meal consuming animal units, I expect that the number of cattle on feed during the year ahead will be up 2% from the year just ending.

We know that the fall pig crop is up from last year. One of the big question marks for the year ahead is the size of the spring pig crop. The price of corn will likely be quite low this fall. The hog cycle is

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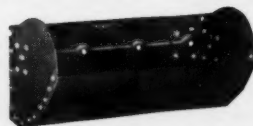
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in an up phase. However, a large proportion of hog raisers will have corn that is eligible for the \$1.20 loan. Will they look at cheap corn and increase spring farrowings or will they consider that the corn in their cribs is worth the loan and play it safe by selling gilts and selling corn to the government? It is a big uncertainty and I have no firm opinion. For the sake of the argument, I have increased the spring crop by 2%. I am reluctant to fly in the face of cheap corn and the hog cycle. This factor will bear watching closely as the year progresses.

Dairy-cow numbers should be down moderately in line with the long-term trend.

The average number of hens on feed should be up about 8% as the result of the larger hatch of chicks this past spring. This number is high in relation to trend and I am apprehensive about it. It, too, will bear watching.

The number of replacement chicks should be down moderately in response to somewhat lower egg prices.

Broiler numbers during the past year were up substantially. They always have gone up. Yet, I placed them at the same level for 1961-62 as they were in 1960-61. Some of the major losses that have been sustained during the past year must be recouped.

The nearly disastrous year in turkeys should result in a decrease. I have marked turkey numbers down 8%. Even so, it will be the second largest year on record.

These several things indicate a livestock population slightly larger

during the year ahead. The detailed reckoning comes out to an increase of 1%.

The demand increment will be greater than 1%. There is an increase in demand per animal unit, at constant prices of livestock and meal, that averages 4.27% per year. It is as if the number of livestock was increased by this amount each year. It should be present again in 1961-62.

The index of livestock and livestock product prices should be just a bit higher during the year ahead. Total production appears likely to

increase less than population. General economic conditions appear to be moderately improved which should add to consumer demand.

The demand for soybean meal for export will probably be less. Exports have been down during the past year. Basically, the importing countries prefer to import soybeans rather than oil and meal. But, exports will be substantial. I place them at 350,000 tons.

These several things combined into my forecasting formula indicate an average price for the season of \$52.85 for 44% meal, bulk Decatur, unre-

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stricted billing. This result surprised me when my calculator ground it out. I had expected something less in the face of a 450-million-bushel crush. But, the meal market has had a tremendous growth and does not seem to have reached the end. This is a fundamentally sound market. On it is based the expanding demand for soybeans.

**Oil.** Soybean oil is in basic surplus. It appears likely that total world fats and oils supplies will be up 4% to 5% during the 1961-62 crop year. This represents a per capita increase from recent levels. Inventories have been rebuilt during the past year.

A substantial part of the increase will go into inventory.

During the past year, U. S. exports have lagged seriously. During the October-June period of 1960-61, the combined exports of soybean oil and cottonseed oil totaled 886 million pounds compared to 1,073 million during the comparable period of 1959-60. P. L. 480 exports were down 60 million pounds and dollar sales were down 127 million. In addition, lard exports decreased 139 million pounds.

The amount of P. L. 480 oils programmed to be shipped after July of 1961 was 169 million pounds. On a

comparable date the year before, the amount on the P. L. 480 books was 471 million pounds. It is clear that we have been having a great deal of difficulty programming soybean and cottonseed oils during the past year.

The exportable surplus of soybean and cottonseed oils during the past year was about 1.5 billion pounds. It now appears likely that exports will amount to about 1.2 billion pounds. It appears that the carry-over at the end of the current crop year will be up substantially from year-ago levels.

If we do crush 450 million bushels of soybeans, the total output of edible fats and oils will amount to 11,600 million pounds compared to 11,050 million pounds in 1960-61. The domestic use should increase about 1.5% and total 9,084 million. This leaves an exportable surplus of 2,516 million. From this we should subtract 10 million butter, 450 million lard, and 175 million of other. This leaves a need to export 1.9 billion pounds of cottonseed and soybean oils if our already large carry-over is not to be increased.

The export need this year represents a 50% increase from the current level. It must move into a world already liberally supplied.

A more discouraging economic outlook for soybean oil is difficult to imagine. Yet, this matters not at all in the price outlook for soybean oil during the year ahead. The government will take such steps as are necessary to hold the carryover of soybeans to a "reasonable reserve."

Soybean meal at \$52.85 is worth \$1.24 per bushel of soybeans. This amount subtracted from \$2.62 equals \$1.38 which, at 11 pounds per bushel, is 12.5¢ per pound. Except as the USDA miscalculates in its inventory actions, that should be the average price for the season.

**Seasonal variation.** In the matter of holding soybeans, farmers have a tendency to do this year that which they should have done last. This tendency is especially marked following years of major price increases. It is likely that farmers will overhold soybeans. The only reason to have a major market run of soybeans this fall is a shortage of storage space because of the very large crop.

Speculators in futures markets will probably remember last year and buy aggressively through the harvest period.

It appears that the prices of soybeans, futures in particular, will remain strong through the harvest and rise into the winter. If the pattern follows that of similar years in the



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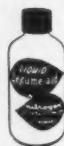


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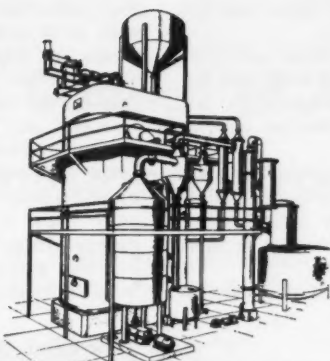
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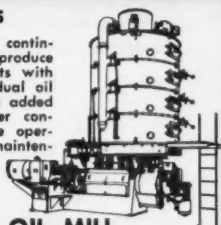


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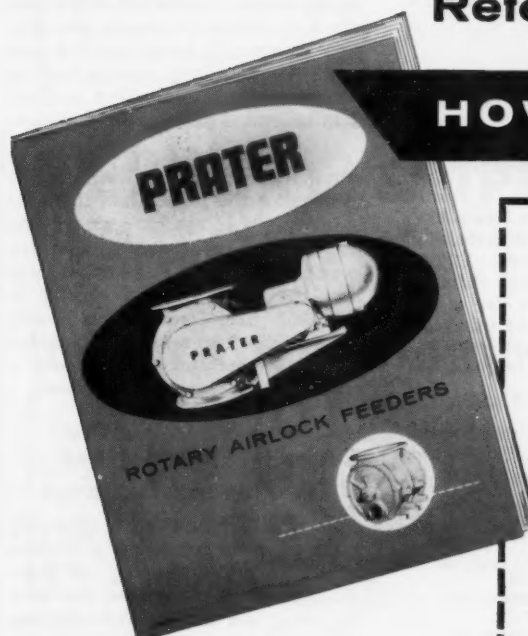
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past, the price will reach its peak in November or December and decline during the spring months. War would, of course, alter the picture.

Oil and meal prices should pivot around the soybean price. As one is high the other can be low. The burdensome carryover situation in oil is apt to carry through the fall months. Meal users and speculators, remembering last year, are apt to overbuy during the fall months. A high price of meal in the fall will re-

duce use just as a low price last fall stimulated use.

Thus, we see the likely prospect of the season's high in meal and the season's low in oil prices in the fall followed by a meal decline and an oil rise.

**The longer run.** At this point, I have completed my assignment. But, there are longer-run outlook considerations that I would like to mention.

We have had major increases in

the production of soybeans in the past as a byproduct of price programs for other commodities; 1954 and 1958 are the most notable examples. In both instances the crop was kept out of surplus trouble by prompt reductions in the support price. Soybeans have been a tremendous success story in a troubled agricultural world during the past decade. Price supports low enough to avoid surplus accumulation have been an integral part of this success story.

Increased price supports and deeper involvement in surplus-disposal programs for oil are rapidly drawing soybeans into the sphere of governmental domination. The opportunities to turn back are becoming more limited. The climate in Washington is not conducive to lower support prices. It will take very vigorous action on the part of the industry to get a reduction.

It may well be that the industry wishes to move in the direction of more governmental involvement. As you all well know, I think that in the long run the most profitable direction for the industry, growers in particular, to take is away from government. The time for choice is limited. If you are going to go away from government, you had better start now.

Most importantly, I would urge you to think through to the end the consequences of going all of the way into a governmental supply-management program. I doubt that it is possible to indefinitely remain half in with large oil subsidies and half out with unlimited production.

This is not the time or place to argue the details, but I would like to advance the proposition that this industry would not have grown and prospered as it has, had it taken the governmental route when it was first threatened with a surplus in late 1953. This conclusion is largely based on the general proposition that the wisdom of the market place is greater than that of government.



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## Connolly Elected Head N. Y. Produce Exchange

NEW YORK Produce exchange has announced the election of Thomas M. Connolly, Cargill, Inc., as president of the Exchange for the coming year; and of Donald V. McDonald, Francis I. du Pont & Co., as vice president.

Sidney Fashena, a partner of I. Usiskin & Co., was reelected treasurer.

# Soybean Council of America

## —Promotional Progress

By **HOWARD L. ROACH**  
President, Soybean Council of America



**PROMOTIONAL** progress is just a high-sounding term to describe what the Soybean Council is doing and how it is being done. It would be well, therefore, to define our objectives in broad terms. The Soybean Council is embarked on an "educational program to teach better nutrition and diets to the people of the world and how soybean products can be of assistance in this effort." Responsibility has been given the Council to carry forward this teaching to 41 countries located on all of the continents.

The Council has responded in 21 countries thus far, with active offices located in 14 countries. The population of these 41 countries exceeds 1 billion persons.

The question naturally follows, "What does the Council have to offer?" The answer is, "Soybean products—a superior vegetable protein and a wholesome, palatable vege-

table oil." The Council is not alone in this effort to improve the diet and satisfy hungry people. Other commodity groups such as Great Plains Wheat Market Development Association, U. S. Rice Export Development Association, Millers National Federation, U. S. Feed Grains Council, Dairy Society International, National Renderers Association, Institute of American Poultry Industries and many others also have the same objectives as the Council. The Council works and cooperates closely with many of these organizations.

It should be pointed out that consumers are not interested in soybeans but are interested in products made from soybeans and, therefore, the Council does not spend time cultivating the desire for soybeans as soybeans, but rather devotes its efforts to the promotion of soy products. It makes no difference to the Council where the processing takes place. We, of course, would like to see the processing done in the United States, but we realize, and

our processors realize, that others also want to perform this task. The most efficient processor will watch his business grow while the less efficient processor will have a struggle to survive.

Within the past 9 months, your president has visited 25 countries located in South America, Asia, the Middle East, Africa and Europe. Everywhere we have heard the call, as Paul and Luke were called 1,900 years ago, and as recited in Acts 16:9, "And a vision appeared to Paul in the night; there stood a man of Macedonia, and prayed him, saying, 'Come over into Macedonia and help us.'"

### Peoria Conference

Every good thing should start at home and, therefore, the Council has spent much time and effort on programs here in the United States. Through our director of nutrition, Dr. James W. Hayward, a conference will be held in September when many scientists and others will for 3 days consider "Soybean Products for Protein in Human Foods." Two weeks ago the entire soy protein committee of the Council met with the Food for Peace officials in Washington and presented ways and means that soy products could be of assistance in this program. Preparation and planning for these important conferences takes much time and effort here at home.

Communicating the telling of what the Council is doing, checking with authorities to see if proper statements are being made and all of the efforts of communication, writing statements and speeches, letter writing, telephone, cable and other methods of communication take a large part of the efforts of our domestic staff.

Our methods of promotion overseas are undertaken in the following manner:

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too numerous to mention, we are forced to generalize on methods of education used by the Council in different countries. Following are some of the general policies and methods used to tell the soybean story:

1. Survey the market situation in each country, and determine the role which U. S. soy products can profitably play in the life of that country.

2. Establish an office that gives the impression of an on-going business organization that will be permanent. This means a suite of offices in a good business district, equipped in good taste according to the business customs of the country. We have learned that our overseas friends do not want to do business with companies and organizations that are here today and gone tomorrow. Our friends overseas are in business for keeps and expect us to feel and act in like manner. The Council does not emphasize price of our products but rather, dependability of supply from U. S. sources. Many nations have now learned that in order to stay in business, dependability of supply is far more important than price. They demand an assurance of supply. Our office, our staff and all our actions must carry forward the impression of dependability.

3. Employ a national of the country where the office is located as director for the Council and charge him with the responsibility of telling the story of soybean products to those who make or influence deci-

	Population 000,000	Calories per day	Protein per day (grams)			Total	Fat per day grams
			Animal	Pulse	Other		
USA .....	183.0	3220	65	5	26	97	149
Ireland .....	2.9	3375	46	1	42	89	112
Argentina .....	20.2	3360	62	1	37	100	121
Denmark *\$ .....	4.5	3255	55	1	32	88	139
U.K. *\$ .....	51.5	3200	56	2	27	85	128
Norway *\$ .....	3.5	3180	43	1	33	77	131
Finland .....	4.4	3110	46	1	37	84	115
Poland .....	29.0	3100	35	1	43	79	97
Switzerland .....	5.2	3040	50	1	31	82	110
France *\$ .....	45.2	3015	48	2	37	87	108
Austria .....	7.0	3010	41	1	33	75	109
Uruguay .....	2.7	2945	59	1	50	110	118
W. Germany *\$ .....	53.0	2935	42	1	31	74	124
Sweden *\$ .....	7.4	2935	50	1	26	77	124
Netherlands \$ .....	11.1	2895	43	1	28	72	119
Belgium *\$ .....	9.0	2890	42	1	33	76	112
Italy *\$ .....	48.6	2775	27	5	46	78	73
Yugoslavia .....	18.3	2770	24	5	59	88	60
Israel *\$- .....	2.0	2715	30	3	46	79	76
Nigeria .....	36.6	2680	6	9	45	60	49
Turkey *- .....	26.2	2650	12	3	66	84	32
Chile *\$- .....	7.3	2610	27	6	38	71	61
Greece .....	8.5	2600	22	6	47	75	73
Spain *\$ .....	28.7	2565	23	7	43	72	79
Portugal .....	8.2	2485	20	5	40	65	72
Egypt *- .....	25.0	2340	7	12	51	70	45
Venezuela *\$- .....	6.3	2255	18	9	29	56	48
Colombia *\$- .....	13.6	2225	14	3	34	51	43
India *- .....	432.0 ('51)	2050	6	15	36	47	34
Peru *\$ .....	10.2	2040	13	6	33	52	34
Iran *\$- .....	19.8	2040	18	4	45	67	44
Pakistan *- .....	86.0	2030	10	8	36	54	20
Ecuador *- .....	4.0	1935	10	7	28	45	32
Taiti .....	3.4	1875	4	13	25	42	22

\* Denotes SBC office and/or suboffice. Soybean Council offices are in 21 countries with 892,-900,000 population. Peru office: Chilt, Colombia, Ecuador, Peru, Venezuela; Denmark office: Denmark, Norway, Sweden; Netherlands office: Belgium, Netherlands. \$ Dollar markets. - P. L. 480 markets, all or part.

sions within his country. The Council has a comprehensive training program for all employees. The director is made responsible for employing other members of his staff. To tell the story effectively, the director must have a good personality, be able to meet persons important in business and government, know English and other languages, and must have executive ability to hire, organ-

ize and supervise his own staff as well as organize seminars, fairs and other information media the Council may see fit to employ.

4. Obtain cooperation from local organizations such as fats and oils associations, vanaspati associations, mixed feed manufacturers associations, livestock syndicates, universities, particularly the departments of nutrition, both animal and human, extension services, school authorities, international organizations such as UNICEF, WHO, FAO, all to serve as advisors and cooperators with and for the Council. The Council works closely with other U. S. government agencies such as International Cooperative Administration, U. S. Information Service, U. S. Operations Missions and others. In many cases these organizations contribute money, time and services to assist the Council in achieving our objectives . . . telling the story of soy products to the people of the country.

5. The Council exhibits at national and international trade fairs, exhibits and bazaars to place the story of soybean products before the people.

6. The Council organizes symposiums and schools and supplies, either from the United States or other countries, internationally known nutritionists and technicians to deliver papers on specific subjects. After

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**MOBILE FEED** exhibit of the Soybean Council travels in European countries telling the story of soybean meal. Here is the exhibit at Odense, Denmark. Left to right: Ejvind Sondergaard, SBCA director for Denmark; Roy L. Neeley, feed grain division, Foreign Agricultural Service, USDA; A. E. Arneson, press officer, Agricultural Marketing Service, USDA; and E. D. Griffin, member of the board of Allied Mills, Inc., who represented the Council at the exhibit.

the close of the meetings we encourage these persons, representing the Council, to meet with local business interests.

7. We furnish technicians and advisors as consultants that have particular knowledge in:

- a—Livestock nutrition.
- b—Fats and oils technology.
- c—Human nutrition.

d—General engineering knowledge on shipping, feed handling, storage of both oil and meal and product packaging.

8. We establish liaison with individuals and companies wishing to procure knowledge of U. S. merchandising methods.

9. Give to local press as well as U. S. Information Service information on use of soybean products.

10. Bring to the United States persons selected by local business interests, after counsel by our local director and the agricultural attache of the American embassy, to view agricultural production of food in the United States and to visit the U. S. soybean processing industry. We also afford opportunities for our guests to observe U. S. merchandising methods.

11. Sponsor magazines and publications. One example, Nutrition, first published in Spain and now used in all Spanish speaking countries.

I will give you a detailed report on one of our more recent activities.

Three years ago I visited India and was in charge of a soybean exhibit at the agricultural section of the Small Industries Fair at New Delhi, India. While at the fair, I met many persons interested in soybeans and, on request, gave to some vanaspati manufacturers several cans of soybean oil for examination and analysis. This was the first soybean oil these Indians had ever seen. Later the Council had exhibits at Bombay and Madras to keep alive the interest generated at New Delhi. Correspondence and conversation were maintained with vanaspati manufacturers and government officials and this year, in the month of May, the first shipment of soybean oil was sent to India, being purchased under P. L. 480.

As soon as the Council learned the name of the supplier, we asked him to make sure that the initial lot of soybean oil destined for India was

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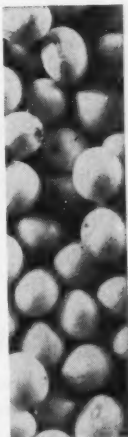
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of the highest quality, under the grade purchased. The Council received splendid cooperation. The seller let us know the grade, analysis, date shipped, name of the carrier and probable time of arrival, and also furnished the Council a composite sample of each lot of oil.

In India the Council organized four consecutive meetings of oil refiners and processors which were held in Bombay, Delhi, Calcutta and Madras. The Council asked that the technical personnel from companies interested in handling soybean oil be in attendance.

The Council sent our oil consultant, Edward James, to India to give lectures and answer questions at these meetings. Dr. James has had considerable experience organizing symposiums in Spain, Italy, Egypt and Pakistan for the Council. In addition to giving the four series of lectures and answering many questions, Dr. James was able to visit a number of oil refiners and hydrogenation plants. Reports the Council have received from India indicate this series of meetings was a most successful undertaking from the standpoint of making Indian technical people informed about soybean

oil, and answering questions regarding same.

If I had time I could go on and tell you about a project now in progress with the school of nutrition, University of Jerusalem, on soy dishes; about the work with University of Rome on pasta, and many others.

I especially want to pay tribute to Agricultural Research Service, USDA, for working closely with the Council in making grants for soybean product utilization research in eight foreign countries, namely, Israel, Thailand, France, Italy, Poland, Spain, U.K., and Japan in the amount of \$788,000 worth of foreign currencies.

The foregoing is but a partial list of the Council activities overseas. Time forbids a complete list of the many activities in the 21 countries in which the Council is active.

To carry on our activities, Foreign Agricultural Service of the USDA has been most helpful. They have given us sound advice, supplied manpower to help in surveys in overseas areas, opened many official doors that would have been closed to us and finally supplied us with foreign currency, to date, amounting to \$2,915,100 and have promised us

\$4,867,000 more to carry on our program through 1967. In return, all they ask is that the Council furnish an adequate staff to supervise the expenditures of this amount of money. This we cannot do with our present staff and we are asking for more money next year to perfect the staff we need.

The support of the Council by the soybean processing industry has been excellent. It is embarrassing to report that financial support from the growers has been poor. We have as members a few cooperator elevators and cooperative organizations that support the Council, but many are without the fold. A better story needs to be told about our activities, but this takes time and more money. Two things we do not have.

The Council is unique, even for the United States—an organization of both processors and growers, working together, dedicated to tell the story of soybeans and soybean products throughout the world. It is a welcome story; for the world is asking today just how far soybean products can go to solve the problems of hunger and malnutrition on every continent of the globe. The answer, properly told, represents a big challenge and a greatly increased business for the American soybean industry. We deeply appreciate your continued support. The man from Macedonia is still calling, "Come over and help us."

We have the opportunity today to influence the diet of the world from this day forward—as Paul's affirmative influenced Europe and the world.

This is our opportunity. Let us grasp it while we can.



EIGHTH NATIONAL Poultry Show at Varese, Italy. Adolino Di Giorgio, SBCA assistant director for Italy, illustrates the uses of soybeans and soybean products to the Hon. Nullo Biaggi, Italian Undersecretary for Industry and Commerce, during the latter's visit to the Soybean Council's stand at the most important poultry show in Italy. The Council's mobile exhibit was also shown at the fair and will appear at other fairs throughout Italy. Left to right, Hon. Biaggi, Dr. Di Giorgio; and Emilio Nacci, SBCA press office.

## DID YOU PREDICT PROFITS FROM BEANS?

Here are actual statements from the Commodity Advisor SPECIAL SOYBEAN REPORT August 26, 1960, before the big price rise in 1961.

"The 1960-61 crop year . . . presents a vastly different picture . . . we feel that the basis for a good bull market is in the making. In fact . . . prices could work sharply higher . . ."

"The most significant factor in the table above is the yearly increase in exports . . . a steady increase in exports is the major factor creating a larger demand for the coming season."

"Total demand increased 32 million bushels in 1959 . . . another 20 million bushel increase is forecast for the 1960 season. It appears that a larger production will be required in 1961 and in subsequent years."

"We feel that this is one year when there may be a good opportunity for capital gains trading and suggest the May future . . ."

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# Poultry Raising European Living Level

By JOSEPH LE BIHAN

French Agricultural Research Institute

ers is rapidly increasing in Europe. Europe has benefited from U. S. experience in breeding, nutrition and management techniques as well as in marketing. It is not too much to say that broiler production is chiefly a U. S. importation.

I give you some production statistics:

## BROILER PRODUCTION IN 1960

France	120 million birds
Italy	70 million birds
Benelux countries	35 million birds
Holland	28 million birds
West Germany	17 million birds
Total	250 million birds

As in all countries and chiefly in the United States, vertical integration in all forms is increasing in the broiler industry in the Common Market countries. In 1960 the percentage of broiler production integrated either by contract or ownership was the following:

France	19%
Italy	7%
Benelux	50%
Holland	80%
West Germany	28%

The cooperatives that are integrated (happily for their members) have mostly developed in France and in southern Germany.

In the other countries and even in Holland cooperatives cannot compete against strong private feed manufacturers.

Intensive broiler production is not increasing to the same extent in all areas of the Common Market.

Poultry production, chiefly in the



**TEAM OF** French livestock feeding experts began a nationwide tour of U. S. feed manufacturing and soybean industries by attending the ASA convention at Indianapolis. Left to right, Joseph Le Bihan, chief of livestock section, French Agricultural Research Institute; Roger Brissard, president of the French Union of Feed Manufacturers; Jean-Michel Gourdon, chief of laboratory, Duquesne-Purina Co.; R. W. Fischer, assistant to the president, Soybean Council of America, which sponsored the tour; Paul Breschet, Paris; and Mrs. Gabrielle Arnaud, assistant secretary general, French Federation of Mixed Feed Manufacturers.

form of integrated programs, is developing mostly in the underdeveloped areas on small farms where the level of income is low.

We note the following regions:

France—Brittany and the mountains of the southeast  
Italy—Como and Forli  
Belgium—Limburg  
Holland—Geld  
West Germany—Bayern, Eiffel, Bode, Wurttemberg

This expansion of poultry production has in a large part been promoted by the largest European feed manufacturers.

As soybeans are an important import for poultry formula feeds, it is evident that for you soybean producers this expansion is an interesting opportunity.

The role of Europe economically reinforced in the great Common Market as an outlet for soybeans is evident because poultry and egg production will grow rapidly in the future. Poultry production has already begun to transform this region to a higher level of living and to step up its economic motivation.

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# Soybeans and Their Importance to Our Balance of Payments

By JOSEPH W. BARR

Assistant to the Secretary of the Treasury

THE TABLE, "U. S. Balance of Payments," is not marked "confidential" or "top secret" but it is a state paper of vital importance to the President and to the government of the United States. Most of the state papers that carry these ominous classification warnings at the top of the page contain information which relates to our ability to maintain our military and diplomatic posture in these rather turbulent times.

**ASA's  
41st  
at  
Indianapolis**

This fairly innocent-looking table provides strong clues to our ability to deploy U. S. troops around the world, and to assist the underdeveloped nations struggle up to a level of economic decency. In short, this table entitled, "United States Balance of Payments," gives a running history of our economic ability to meet the threat of the communist challenge in the world today. There

are few, if any, more important documents in the United States, no matter what their security classification.

At the risk of explaining to you something that you already know, I believe that it would be useful to run through this document and make sure that we all understand it thoroughly.

Lines 2 through 7 detail U. S. payments to the rest of the world.

Line 2 shows the amounts we pay for the goods we buy abroad.

Line 3, the amount we pay out for services (shipping and U. S. tourists traveling abroad are heavy components in this item).

Line 4 shows the amount we pay to maintain our troops around the world.

Line 5 details the amounts that U. S. business invests in the rest of the world.

Line 6 shows the amounts we are paying out in our various aid programs.

Line 7 shows the amounts we pay out to pensioners living abroad and the amounts sent from this country to relatives and others living in foreign countries.

The totals of these 6 lines add up to our basic payments to the rest of the world and, as you can see from Line 1, totaled \$27.4 billion in 1958, \$29.7 billion in 1959, and \$30.1 billion in 1960. For the first quarter of this year, the total of our basic payments came to \$7.2 billion.

Lines 9 through 14 set forth the receipts we get from the rest of the world.

Line 9 indicates our receipts from the goods sold to the rest of the world.

Line 10 shows the return on U. S. investments in the world, and the rather confusing word "Other" in Line 11 is made up mostly of the amounts we receive from shipping, bank fees, insurance premiums, and foreign tourists visiting the United States.

Line 12 shows our sales of military equipment.

Line 13 sets forth foreign investment in the United States.

Line 14 shows repayments to our government of loans made under various programs.

Line 8, showing our total basic receipts, indicates that they totaled \$23.9 billion in 1958, \$25.3 billion in 1959, \$28.2 billion in 1960, and \$7.3

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UNITED STATES BALANCE OF PAYMENTS 1958-60 (billions of dollars)

	1958	1959 <sup>1</sup>	1960	First quarter 1961 (Seasonally adjusted)
<b>Basic components</b>				
1. U. S. payments—total	27.4	29.7	30.1	7.2
2. Merchandise imports	13.0	15.3	14.7	3.4
3. Non-military services	4.7	5.1	5.6	1.4
4. Military expenditures abroad	3.4	3.1	3.0	.8
5. U. S. direct and portfolio investment abroad	2.5	2.3	2.5	.5
6. U. S. government grants and credits (gross)	3.1	3.0	3.4	1.0
7. Pensions and remittances	.7	.8	.8	.2
8. U. S. Receipts—total	23.9	25.3	28.2	7.3
9. Merchandise exports	16.3	16.3	19.4	5.0
Non-military services				
10. Income on investments	2.9	3.0	3.2	.9
11. Other	3.8	4.1	4.4	1.1
12. Military sales	.3	.3	.3	.1
13. Foreign direct and portfolio investment in U.S.	*	.6	.3	.1
14. Repayments to U. S. government	.5	1.1	.6	.1
15. Basic balance (Deficit —)	-3.6	-4.3	-1.9	+2
<b>Other components</b>				
16. U. S. private short-term assets abroad (Increase —)	.3	.1	-1.3	-.5
17. Unrecorded inflow (+) or outflow (—)	+ .4	+ .5	-.6	+ .1
18. Overall balance (deficit —)	-3.5	-3.9	-3.8	-.3

Note: Excludes military grant transactions. Details may not add to totals due to rounding. \* Less than \$50 million. <sup>1</sup> Excludes U. S. subscription of \$1.4 billion to IMF.

billion in the first quarter of this year. The difference between Lines 1 and 8 shows our basic deficit or surplus position which is indicated in Line 15.

You can see that we ran a basic deficit of \$3.6 billion in 1958, \$4.3 billion in 1959, and \$1.9 billion in 1960, and a surplus of \$200 million for the first quarter of 1961.

In addition to these basic components we get into the so-called "hot money" question in Lines 16 and 17.

Line 16 shows the short-term movement of money into and out of the country.

Line 17, entitled "unrecorded inflow or outflow," is the statistical remainder which we think is mostly the flow of short-term capital.

On this assumption, you can see that we had a net inflow of short-term money into the country in 1958 in the amount of \$100 million, an inflow of \$400 million in 1959, a net outflow in 1960 of \$1.9 billion, and a net outflow of \$400 million in the first quarter of 1961.

When you combine the basic components (Lines 1 through 15) with the short-term capital movements in Lines 16 and 17, you come up with the overall balance figure on Line 18, which indicates an overall deficit of \$3.5 billion in 1958, \$3.9 billion in 1959, \$3.8 billion in 1960, and \$300 million in the first quarter of this year.

### Financing Deficits

These deficits can be financed in one of two ways. Foreigners can increase their bank deposits or holdings of U. S. obligations in this country or these debts can be channeled into central banks or governments, and these organizations can ask that their claims be paid off in gold.

If we run a surplus in our accounts, we can reverse the above procedure and either increase our foreign holdings or ask to be paid off in gold.

This is a rough outline of the rules of the game as it is currently being played. Probably the best title for this system is the "gold-exchange standard." It is a system under which gold plus the dollar and sterling, plus other currencies to a limited amount, are used as the reserves of the Free World and as a means of settling accounts. In other words, the U. S. dollar and gold are the principal underpinnings of the financial systems of the Free World.

Until very recently no one in this country had much reason to be concerned about the question of balance

of payments. We had enormous gold reserves and our competitive position in the world markets was almost unchallenged. But, starting in 1958, we were jarred awake to the fact that we were now living in a fiercely competitive world and that the claims against our gold reserves had grown uncomfortably large and were increasing.

We lost \$2.3 billion in gold in 1958, \$700 million in 1959, and \$1.7 billion in 1960. In the first 3 weeks of 1961 we were losing gold at the rate of about \$4 billion a year.

President Kennedy was advised by President Eisenhower that this was a problem of absolutely top priority. It involved the financial stability of the Free World and the ability of this Nation to stand up to and meet the pressure of worldwide communist forces.

It is apparent from the document I have given you that the problem breaks down into two parts. To meet the problem of the basic deficit we had to step up our efforts to capture world markets. But the flow of short-term funds involved other approaches. In the fall of 1960 and the early weeks of 1961, it was this "hot money" problem that was the most acute and required immediate attention. Concern about the international situation, rumors about changes in the price of gold, and speculation created an atmosphere in which about \$2 billion of U. S. dollars was drawn out of the United States by foreigners and U. S. citizens mainly during the second half of 1960. The outflow continued strong in the early weeks of 1961.

Obviously, this hemorrhage in our reserves could not be allowed to continue. President Kennedy stated flatly that we did not intend to devalue our dollar. We then entered into various cooperative moves with our Allies in the Free World and by early March had halted the gold outflow, and since that time have reversed the picture and have had a net inflow of gold amounting to \$214 million.

At the moment, we are on top of the problem of the flows of short-term capital, but we are not claiming by any means that it is solved. We are increasing our efforts to contain "hot money" movements through international financial cooperation supplemented by the resources of the International Monetary Fund. But in these times of tension, we will need strong nerves to carry us through periodic crises.

We are now turning our attention to means of strengthening our posi-

tion in the basic sector of the balance-of-payments accounts—namely, we are stepping up our efforts to sell more to the rest of the world. This is where soybeans come into the picture! Perhaps it is difficult for you to think of the humble soybean as a major international weapon of this country. But this is just *what* it is becoming.

This year we will sell into the world market for dollars soybeans in the amount of about \$500 million. If you want to look at it another way, consider these facts: It costs this nation about \$250 million in tax money and somewhere near the same amount in international exchange to maintain one division of troops in Germany for a year. One can then argue that soybean exports are providing the needed exchange to support two divisions in Germany. Looked at in this light, you can understand my statement that the soybean is a mighty international weapon of this Nation.

As we struggle to increase the exports of the United States in an attempt to close out the balance-of-payments deficit that has plagued us for 3 years, it is only natural for us to look closely at soybean export prospects. In merchandising par-

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lance: "Soybeans are one of our hottest sales items."

The trend in the exports of soybeans and derivatives is astounding. From 1950 to 1953, exports averaged \$134 million a year. By 1957, the export market jumped to \$344 million, slumped a bit to \$343 million in 1958, moved up to \$424 million in 1959, to \$481 million in 1960, and preliminary estimates show that we will sell a total of \$535 million in world trade in 1961. This is an increase of 400% in 10 years. Tentative figures indicate that in the next 5 years, by 1966, the export of soybeans can jump another 80% and push the total value exported up near the billion-dollar mark.

### Amazing Trend

This soaring trend line is amazing and is not apparent in our other agricultural exports. We exported wheat to the value of \$986 million in 1951, and \$1,026 million in 1960. The figures for cotton are \$1,138 million in 1951 and \$980 million in 1960. For tobacco, the figures are \$326 million in 1951 and \$378 million for 1960.

Last year soybeans (plus derived products) nudged tobacco out of third place in the scale of our agricultural exports. And if the present trends continue, soybeans will be pushing wheat and cotton for first place by 1966.

When we look at the total export picture—not just agriculture—we find that our sales in world trade come from the following industries which I am listing in order of importance: agriculture, machinery, chemicals, automobiles, nonferrous ores, iron and steel mill products, petroleum, textiles, metal manufactures, pulp and paper products, rubber and manufactures, coal, and iron-and-steel-making raw materials.

As one looks down this list, it can be seen that we face fierce worldwide competition in nearly every one

of these areas. The blooming industrial nations of Western Europe and Japan will give us a good "run for our money," in machinery, chemicals, automobiles, iron and steel products, textiles, and metal manufactures. There seems to be a worldwide oversupply of petroleum and metals, and there is no visible shortage of pulp or paper products.

Reasonable men could probably agree that it will take all our production ingenuity and sales ability to increase our export markets in these areas. I do not believe that any of these fields can realistically hope to match the potential 80% growth of soybean exports in the next 5 years. This is the reason why we in Treasury look with especial attention at soybeans, probably our "hottest national sales item."

I know that you will pardon me for taking a bit of special pride in the fact that my state—Indiana—will produce about 80 million bushels this year and will rank third after Illinois and Iowa.

When I asked the Department of Agriculture how this export record in soybeans had been achieved, they told me that it was the result of a huge worldwide demand, an improvement in the ability of foreign nations to buy, and a very intelligent world sales effort sponsored jointly by the American Soybean Association and the U. S. Department of Agriculture.

There is not much doubt about the demand. For the hundreds of millions of people living in the underdeveloped areas of the world, the oil and protein that soybeans can furnish to their diet mean the difference between a healthy life and slow starvation, on a diet mainly limited to carbohydrates. As these nations gradually gain some ability to pay, they literally spend their first money on edible oil.

The joint marketing and sales promotion efforts of the Soybean Asso-

ciation, the Soybean Council, and the Department of Agriculture have already resulted in working relationships with 52 nations. When these nations work themselves into a position where they can afford to buy, they find that this sales and educational effort has already established soybeans as a cheap and efficient source of oil and protein.

The Department of Commerce today is engaged in a vigorous attempt to make American business export-oriented. In Treasury, we wish them every success because this is the proper way to cure the basic deficit in our balance-of-payments accounts. In your efforts we have available a working model of export promotion. I will infringe on the domain of Commerce just a bit to recommend a study of your export success to the rest of American business.

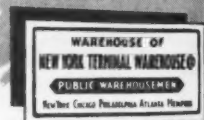
There are other ways that we can cure our balance-of-payments problem. We can pull back our troops from around the world; we can give up our attempts to help underdeveloped nations; and we can abandon the world to the push of communism. We could then raise our tariff walls higher and higher and forget about world competition. It would not be necessary for us to earn foreign exchange to support our commitments to the Free World.

I know of no national leader who suggests that we abandon our efforts to help free men. However, next year in the Congress a serious drive will be made to strike down the Reciprocal Trade Act and to tighten up our tariff protection. From the viewpoint of President Kennedy, Secretary of the Treasury Dillon and the entire Administration, this is the wrong approach. The logical approach is to compete—just the way you people compete in the markets of the world.

I should also warn you that if the Reciprocal Trade Act is not extended next year, then the rest of the world will not be able to earn the dollars they need to buy your soybeans. They must sell to us to be able to buy our products.

You have done a magnificent job in pushing soybean exports up to a position where your success is a matter of deep national concern—to a point where your exports are a truly significant item in our arsenal of international weapons. We in Treasury wish you every success in the future. And I leave with you a request: Come to Washington next year to join with us in extending the reasonable trade policies laid down in the Reciprocal Trade Act.

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# Developing Markets for Oilseeds and Their Products

By **ROBERT C. TETRO**

Administrator, Foreign Agricultural Service, U. S. Department of Agriculture



**IT** WOULD be presumptuous of me to say that the U. S. soybean industry has no problems. Your industry has problems, of course—some of them troublesome. At the same time, I feel that prospects for production and marketing of soybeans and soybean products make up just about the brightest spot in the current agricultural picture.

There is a strong demand, both domestic and foreign, for soybeans and products. Demand has stayed above some of the most optimistic estimates. With demand ahead of supply, ever-increasing crops have moved into consumption over the years at prices generally favorable to producers and processors.

The big crop forecast for 1961 should be no exception to this general tendency. Carryover stocks on Oct. 1, 1961, will total only about 5 million bushels. That's just a handful. Although some increase from this low-level carryover is likely on Oct. 1, 1962, there is every indication that the bulk of the big 1961 crop will be marketed successfully.

Demand—domestic and foreign—is expected to continue its upward trend. Production will expand to meet demand. It could well be that the billion-bushel soybean crop envisioned by your industry may be produced sooner than most folks have been thinking.

On the topic assigned me, "Foreign Agriculture and Soybeans," I will touch on three major points, and their relation to work of the Foreign Agricultural Service. These are:

- 1—Market development.
- 2—Exports to underdeveloped countries.
- 3—The export outlook.

## Market Development

When I think of the agricultural market development work going on around the world today I am reminded of the line from "Music Man"—"You've got to know the

territory." In recent years the Foreign Agricultural Service, in cooperation with more than 40 industry and agricultural groups, has been making a determined effort not only to know the territory but also to expand sales within it. Development work is being carried on in more than 50 countries. Commodities represented include soybean and soybean products, grain, livestock, poultry, rice, fruit, cotton, tobacco, and other U. S. commodities.

The foreign territory of most immediate interest to U. S. agriculture is made up of countries able to buy our farm commodities with "hard" money. The most important of these includes Canada, Japan, Australia, New Zealand, and the nations of Western Europe. However, there are many other countries to which we make hard money sales and quite a few of these will be even better customers in the future. Later on I will discuss exports of farm products made to non-dollar countries.

But, the dollar countries are where the main market development effort is being made. Mr. Hayashi and Mr. Roach give us a good picture of what is being done in the way of promoting dollar markets for U. S. soybeans in Japan, Europe, and elsewhere. These efforts of the American Soybean Association and the Soybean Council of America add up to a fascinating success story. I use the word "success" because exports of soybeans in the July 1960-June 1961 year totaled 143 million bushels—a new record. In addition, the United States shipped 836 million pounds of oil and 600,000 short tons of soybean cake and meal—likewise records.

These big exports of soybeans and products helped to push dollar sales of all U. S. agricultural commodities in 1960-61 to \$3.4 billion—equal to the record. Dollar sales are a major part of our agricultural exports, amounting, in 1960-61, to about 70% of total farm product shipments. Market development work unquestionably has contributed to the grat-

ifying dollar sales picture in recent years.

Like most things in this life, however, market development costs money. From the start of the program to the present, the government's contribution has amounted to \$40.9 million. That covers all projects for all commodities, of course. Cooperating U. S. and foreign trade and agricultural groups have committed themselves to spend \$16.6 million.

Operations involving expenditures that big must be reviewed constantly. Occasionally a major study is required to see how we are doing. Such a study was made this past spring when a task force surveyed all cooperative market development activities and reported to the Secretary of Agriculture. Recommendations of the task force covered a broad field—operation, financing, administration, measurement of results, and other matters. Recommendations are now being studied in the Department. Many will be adopted in whole or in part.

But there's one outstanding "must"—and we don't need a task force to point to it. We must chew all we bite off—and we have taken a big bite. In other words, when government funds are contributed to a market development project, the supervision and technical backstopping must be adequate to carry the program through effectively. That's a fundamental requirement. It means that cooperators must come up with the manpower and money required to furnish proper guidance and administration to projects initiated.

Last week representatives of your industry and the Foreign Agricultural Service joined in a review of what market development work for soybeans will require. It is clear that the needs are great. But I believe that by working together we can and will make the adjustments and assume the increased responsibilities that face us.

Besides direct financial support for market development projects, the

Foreign Agricultural Service is backing up this important work in other major ways.

One is in the area of trade liberalization. The United States, of course, must maintain access to the important dollar markets. Embargoes, unduly high tariffs, variable tariffs, and similar barriers still hamper sales of U. S. farm products in the dollar countries. This country is endeavoring—with some success—to obtain lowering of trade barriers. The effort is being carried on through formal diplomatic representations, participation in international meetings, such as the General Agreement on Tariffs and Trade, and other contacts. The Foreign Agricultural Service is keeping in close touch with Common Market developments. We can all agree that U. S. agriculture has a legitimate interest in encouraging the Common Market to be trade expansive rather than trade restrictive. Some of the Common Market agricultural proposals, frankly, have been rather disturbing.

But we, too, must be pure, so to speak. We want to see other countries, and the Common Market, follow a liberal trade policy. We, of course, must reciprocate. We must always remember that to sell we must also buy. We will be in a better bargaining position if we hold our restrictions to a minimum, and our tariffs to levels that don't unduly hamper imports. It's simply a case of not letting ourselves become a kettle that calls a pot black.

The Foreign Agricultural Service is maintaining a constant flow of information on world agricultural

production and trade. Some of us call it "agricultural intelligence," because it covers facts and figures, not only on production and trade, but also on consumption, weather, political and economic trends, and related matters. U. S. reporting has no equal in any other country in the world. It is a system based on the work of agricultural attaches in 56 posts throughout the world—and on surveys and analyses of marketing and area specialists. We are trying to make this service even better. Reporting schedules are being stepped up. New equipment is being added. New ways of disseminating information collected by the attaches and others are being developed. Service, speed and accuracy are our goals.

Before I leave the subject of market development, I want to touch on a few new developments in the market promotion area.

In November there will be an independent agricultural show at Hamburg, Germany—the largest promotion of its type to date and the first to accommodate commercial exhibitors on a large scale. Another innovation this fall will be use of small exhibits to promote U. S. food and fiber. Such exhibits are scheduled for Stockholm, Sweden; Manchester, England; Copenhagen, Denmark; Stuttgart, West Germany; and Accra, in Ghana. The big international exhibits will continue, of course, in large cities such as London, Paris, Tokyo, and Munich. About 100 trade fair exhibits have been staged in the past 5 years, with a total attendance of over 45 million.

Also, the Department of Agriculture has joined with the Department of Commerce in the first overseas U. S. Trade Center—at London. The new center, which opened in June, gives the United States a permanent "show window" for its farm products in the United Kingdom. The first agricultural exhibit in the center will be held in September.

Other market promotion techniques will continue to be used.

These include market research, advertising, demonstrations, distribution of samples, trade-sponsored visits of foreign officials and buyers to the United States. These and other means of building markets have proved effective over the years.

### Underdeveloped Countries

As I said, some of our agricultural exports go to the non-dollar market—underdeveloped countries mainly in Asia, Africa, and Latin America. Because these countries have limited dollar purchasing power, some of our exports to them are handled under special government programs, mainly under Public Law 480. In the fiscal year 1960-61 our non-dollar exports were valued at \$1.5 billion—about 30% of total shipments.

The special government programs are of four types.

The largest is made up of sales of products for foreign currencies. As I mentioned earlier, foreign currencies obtained from such sales help to finance market development. And considerable sums are loaned and granted back to participating countries to finance economic development.

A barter program makes possible for the Department of Agriculture to exchange stocks of surplus food and fiber for foreign-produced strategic and critical materials. Most barter transactions, man's oldest means of trade, are with the underdeveloped countries.

Long-term export credit sales for dollars are authorized under Title IV, P. L. 480. Objectives are to expand U. S. dollar exports and promote the economic development of friendly countries. Short-term export credit sales of CCC-owned commodities also are made as opportunities present themselves. Credit sales, as well as export sales policy, are special responsibilities handled in the Foreign Agricultural Service by the general sales manager.

Donations, also called "grants," are made by the U. S. government di-

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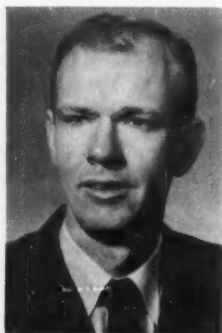
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For convention report by John M. Dunleavy, USDA and Iowa State University plant pathologist, on "Recent Progress in Soybean Disease Research," see page 10, July 1961 Soybean Digest. It was carried in full at that time.



rectly to the governments of underdeveloped countries. Other donations are made through U. S. voluntary agencies operating abroad—or through international organizations, such as UNICEF.

In considering shipments to the underdeveloped countries, let me clarify one point: We in this administration believe strongly that our basic aim in such programs is to use our agricultural capacity to meet the needs of developing countries. We think surplus disposal is bad public relations for U. S. agriculture.

Of course, when we have large supplies of a commodity—wheat, for example—and underdeveloped countries can use that wheat, we accomplish several desirable ends by shipping it. We needn't apologize for the fact that we have a commodity that some other countries want and we don't immediately need. I'm sure Red China would like to be in that position.

However, if a dollar-short country needs soybean oil as well as wheat, but we continue to offer only wheat, we lay ourselves open to the charge of engaging in "surplus disposal." That gives us a black eye in the international propaganda ring. The communists love to tell the people of the uncommitted countries that when we ship them our surpluses we are merely getting rid of something—"dumping" is the word they use—that is a burden to us.

We want to win all the propaganda rounds we can. We want to make the most effective use of our great agricultural strength in bolstering the free world. As a nation of kindly people, we want to help out as best we can because, as President Kennedy has put it, "It is right."

This fundamental change of policy has been reflected in the U. S. Title III donation program to export up to 100 million pounds of refined vegetable oils in calendar 1961. In announcing the program last February, Secretary of Agriculture Freeman said that the edible oil shipments were geared to our determination "to share the blessings of our agricultural abundance with less fortunate people throughout the world." Some of the oil has been shipped already, and plans are fairly well firmed up for movement of the remainder. It looks now as though the 100-million-pound authorization would break down to about 50 million pounds of soybean oil, 40 million of cottonseed oil, and 10 million of peanut oil.

This program probably will be expanded. Funds are available for channeling increased supplies of

edible vegetable oils to the underdeveloped countries. And, I might add, needs of those countries are still very large.

Shipments of soybean oil under Title I, P. L. 480, are expected to continue at a high level. These exports, of course, would be in addition to what moves out under the special donation program I just mentioned. Title I shipments of soybean oil in the fiscal year 1961 amounted to 533 million pounds. Since 1955, over 3 billion pounds have been exported under Title I, which gives you an idea of how important this program has been in stabilizing U. S. prices to farmers and meeting needs overseas.

### Export Outlook

As I indicated earlier, foreign demand for soybeans and products probably will continue to increase over the next few years.

First of all, we have a good product and business is brisk in Western Europe, Canada, Japan, Australia and other countries to which we make the big dollar sales. Good business means purchasing power. This stepped-up ability to buy has been and will continue to be accompanied

by a shift in diets toward increased consumption of animal proteins—supplied largely by meat, milk, poultry, and eggs. That means continued expansion in livestock production, which should stimulate exports of U. S. soybeans as beans, and shipments of soybean cake and meal.

Aside from the feed use of soybeans, there is an increasing demand for U. S. edible fats and oils, including soybean oil. This reflects the rising population, larger per capita consumption outside of Western Europe, limited exportable foreign supplies and improving standards of living. The new U. S. government policy of tying American agricultural capability into increasing world needs is significant from the standpoint of per capita and total use of edible oils in the "underdeveloped world."

A third factor is price. Although the price support level of soybeans in the United States has been \$1.85 a bushel the past 2 years, prices to farmers never got down to that level. In 1959-60, prices to farmers averaged \$1.96 a bushel, and in 1960-61 the average rose to \$2.21. Now the support price has been raised to \$2.30 a bushel. Nevertheless, there is

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every reason to believe that exports will continue to grow.

A fourth factor in the demand situation is, of course, the cooperative market development work of the soybean industry and the government. Determined U. S. efforts to promote soybean use in the world should dovetail with favorable economic factors already existing and with bright indications for the future.

As for competition from foreign producers, there is nothing serious on the horizon. Chinese soybean exports totaled 45 million bushels in calendar 1960 and exports in 1961 are running behind that rate. China's continued failure to make the large capital investments in agriculture necessary if efficiency and production are to be increased is a major factor—and so is China's "population explosion." Exports of other fats and oils from other sources are not likely to expand as rapidly as demand.

What does all this mean in terms of exports over the next 5 years?

Soybean exports of 143 million bushels from the United States in the fiscal year 1960-61 could well in-

crease by about 75% by the end of the next 5 years.

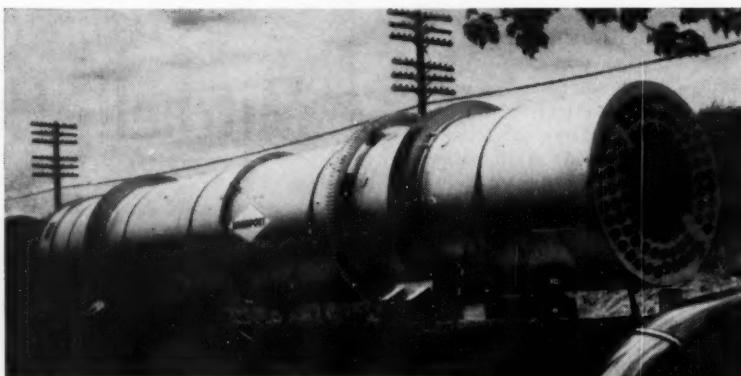
Over this same period, our 1960-61 shipments of oil—about 835 million pounds—could climb to 2½ or even to 3 billion pounds. It could be done.

In the next 5 years we could well be exporting close to three times as much soybean cake and meal for feed as the approximately 600,000 short tons exported in 1960-61.

These are not fanciful estimates. They represent the best judgment of Department economists who have watched soybean exports just about quadruple from 1954 to 1960. They could even be conservative.

### In Conclusion

I said at the outset that prospects for production and marketing of soybeans make up just about the brightest spot in the current agricultural picture. Let's keep those prospects bright. We can do it. Your industry has some problems. The Foreign Agricultural Service also has problems. But I think we all are on the right track. Working together, we can do a great deal to assure good markets for American farmers and a higher standard of living for consumers everywhere.



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# Breeding for Oil and Protein in Soybeans

By HERBERT W. JOHNSON

Research Agronomist, Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, Beltsville, Md.

**H**OW FAR can we go in increasing oil and protein of soybeans through breeding? There is no simple or exact answer to this question, but trying to arrive at an approximate answer to it involves a number of considerations that should be of interest to soybean producers.

The answer to the question will vary tremendously with the restrictions you wish to place on soybean varieties. In other words, what else

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do you want in a soybean variety besides the capacity to produce a high-protein content or a high-oil content in its seed? If you are interested only in high-oil soybeans, I can assure you that we can develop varieties that will exceed 25% oil in their seed. If you are interested only in high-protein soybeans, I can assure you that we can develop soybeans with more than 50% protein. If, however, you are interested in both oil and protein content in the same variety, the answer is drastically different from either of the other two. The more characteristics you want in a soybean variety the less chances you

have in getting a very high performance in any of them.

## Breeding for both oil and protein.

Let us first assume that you are interested in the maximum obtainable amounts of both oil and protein in the same variety. In considering this situation and others to follow, we shall use some charts for purposes of illustration; and I should like to emphasize that the data are hypothetical and presented only for purposes of illustration. They can be considered exact only in that they indicate in a general way what would be expected in the different situations indicated. The actual values obtained in practice might differ considerably from those to be presented, but we have enough information to date to indicate that the trends and conclusions would be the same.

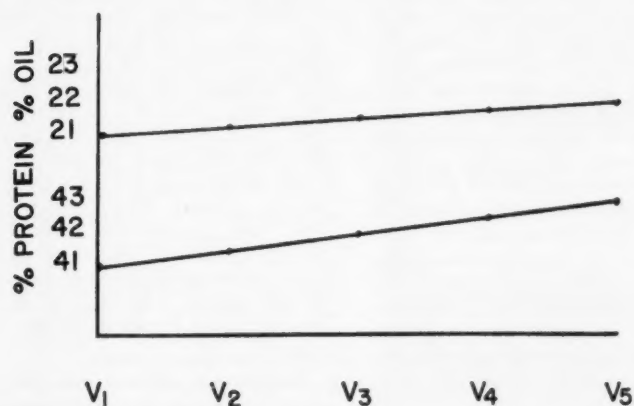
The first chart indicates the kind of progress we might expect to make in several years if we consider oil and protein at the same time. We are assuming that we start with present varieties that on the average have about 21% oil on a dry weight basis and 41% protein; this is our base starting point or Variety 1. (Varieties are identified as V<sub>1</sub>, V<sub>2</sub>, etc.) As

we improve the varieties through the years we could expect to increase oil and protein a little at a time and finally after several years of hard work gain 1% oil and 2% protein.

You probably are wondering why we would not make more rapid gains than indicated. The reason is fairly simple. Oil and protein are closely associated in the soybean seed and it is not surprising that this should be so when you consider that 21% oil and 41% protein account for 62% of the total dry weight of the seed. When one works with this proportion of the total seed and increases one of the components the chances are that he will decrease the other. If just one component were considered at a time, this would almost invariably happen; but with intensive effort devoted to both components, a little progress can be made in both in spite of the tendency for one to increase at the expense of the other. The question then arises as to how much advantage there is in breeding for oil and protein at the same time. We think that there is very little. We don't believe that this is the way soybean breeding should be done; we don't believe that you are that interested in having as much oil and as much protein in the same variety as you can get.

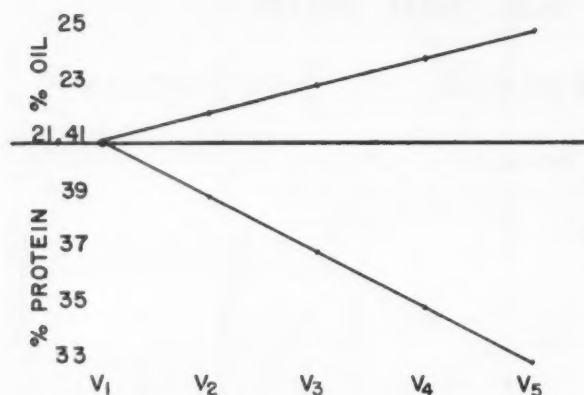
**Breeding for oil only.** Now let's assume that you are interested in only the oil content of your soybean varieties of the future and the breeders of the country decide that this is the only characteristic they are going to consider in soybean breeding. They are going to give you a soybean variety with the maximum amount of oil in each seed and they want to do it just as quickly as possible. The data in chart 2 indicate that they can go from the 21% oil of today up to 25%, plus or minus. (We don't know exactly how far we could go.) But just for the sake of curiosity let's take a look at what might be expected to happen to the protein content of these varieties. The bottom line of the chart indi-

## BREEDING FOR BOTH OIL AND PROTEIN





## BREEDING FOR OIL ONLY

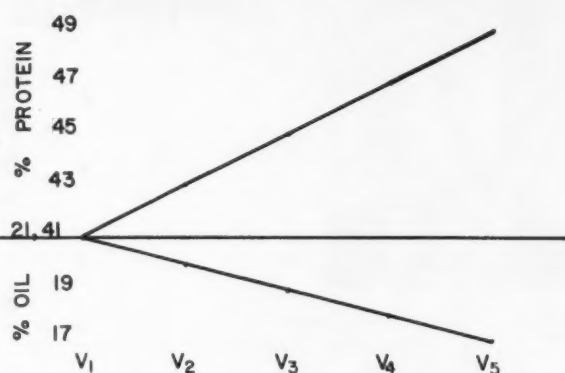


cates what you could expect. Protein is decreased rapidly since all the breeding effort is going into the oil fraction. Such an approach seems to have some advantage over the other situation because we would at least make some good progress in oil, and as long as this is the main interest why worry about oil and protein in the same seed?

**Breeding for protein only.** Next, let's assume that you are primarily interested in protein content. You don't care about the oil in soybeans; you want to produce soybeans for feed and feed only, and since protein is the main component in the soybean used as feed, you want to produce as much of it in your variety as possible. So the breeders decide that the only characteristic they are going to consider is protein. Chart 3 indicates that rapid progress could be made. I think that protein would go well above the 49% level, but note what happens to the oil content of this group of varieties. The bottom line indicates that under these conditions oil is decreased about half as much as protein is increased.

The charts illustrate some of the problems involved in answering the question: How far can we go in increasing oil and protein contents of soybeans by breeding? To answer this question one must first define whether he is interested in both oil and protein, protein only, or oil only. The charts also illustrate reasons why we do things as we do. Over the past several years the primary consideration in soybean breeding has been percent of oil and we have made substantial progress. At the same time we have not lost nearly as much protein as would seem to be indicated by chart 2, and one might raise the question as to why we have not.

## BREEDING FOR PROTEIN ONLY



Remember that chart 1 indicated that we could make a little progress in both components if we worked at it hard enough. But suppose that we work hard at one and just try to keep from losing too much in the other? This is essentially what has been done in soybean breeding in this country and we have been able to make substantial progress in oil with very little loss in protein. However, every time we considered protein in conjunction with oil it made the progress more difficult.

So it seems to us that we are now at a stage in soybean breeding when we should define the types of varieties we want. Do we want the maximum of both oil and protein we can get in the same variety? Are we primarily concerned with oil? Or are we primarily concerned with protein?

If we insist on both in the same variety, little progress is in the offing. If we are concerned with only oil in the variety, we can achieve substantial progress although it will be more difficult than the progress of the past simply because we have already made a good portion of the gains that were originally available in the material with which we have to work. If we are interested primarily in protein, we can make very substantial gains because we have not exploited the variability available in this component. Since we have not been emphasizing protein, it should yield rapidly to selection and we should be able to change it rapidly.

However, the important consideration to keep in mind is that if we are to make substantial progress in either oil or protein, we must be allowed to leave the other one alone. In other words, if we are going to continue to emphasize both oil and

protein and if we are to continue to make significant progress in these characteristics in the breeding program, then we must develop one set of varieties for oil and another for protein. If this were done, I feel confident that we could approach the 25% level of oil and am fairly certain that we could attain the 50% level in protein.

I have purposely avoided trying to predict how long it would take to develop acceptable varieties with 25% oil or 50% protein because of the uncertainties involved. The gains would be made a little at a time with each successive breeding cycle. The gain made in each cycle would be influenced greatly by the amount of effort devoted to yield, disease resistance, resistance to lodging and shattering, etc., in the same material.

**Breeding for yield only.** Another approach to soybean breeding that might be of interest to producers is breeding for yield and characteristics influencing yield without regard to chemical composition of the seed. With this approach, we would expect a decrease in oil from the approximately 21% of current varieties but protein might actually increase. The resulting varieties probably would have seed a little less concentrated than the 62% oil plus protein of current varieties, but they also would yield more bushels per acre. The total production of oil plus protein per acre from such varieties likely would be greater than the production of current varieties but in a little less concentrated form. The reason is again a matter of arithmetic. If we didn't have to consider oil and protein, our chances of increasing yield would be greatly increased.

**General considerations.** We of course recognize the difficulties in-

**COMPARATIVE VALUES PER TON OF SOYBEAN VARIETIES AND STRAINS DIFFERING IN PROTEIN AND OIL PERCENTAGES<sup>1</sup>**

Variety or strain	Composition <sup>2</sup>		Yield per ton of beans <sup>3</sup>		Value of protein and oil per ton of beans <sup>4</sup>
	Protein (%)	Oil (%)	Protein (lbs.)	Oil (lbs.)	
Hood	39.9	22.0	702	387	83.92
Hill	40.0	21.5	704	378	83.06
Lee	41.6	21.2	732	373	84.20
Experimental A	45.0	19.1	808	336	84.77
Experimental B	48.0	18.2	845	320	85.26
Experimental C	52.6	13.7	926	241	81.59

<sup>1</sup> Published in the Cotton Gin and Oil Mill Press 62(8):47. April 15, 1961. <sup>2</sup> Dry-matter basis. <sup>3</sup> Based on 12% moisture soybeans. <sup>4</sup> Value based on 5-year (1955-1959) average prices for oil and protein—oil 10.8¢ per pound and protein 6¢ per pound (44% protein meal @ \$52.80 per ton).

involved in producing, handling, and processing two types of soybean varieties, one high in oil and the other high in protein. Regardless of these difficulties, however, the most optimistic answer to the question I have been asked to consider, "How far can we go in increasing oil and protein through breeding?", depends on the two types of varieties. From a monetary point of view there would be little difference in the two types unless the relative price of oil and protein varied considerably. For example, the data in the table were obtained from three established varieties and three experimental varieties by using average prices for oil and protein for 1955-59. They indicate that the combined value of the oil and meal from a ton of beans is relatively constant for a group of varieties differing greatly in oil and protein contents.

I have not been asked to consider the question, "How far will we go in increasing oil and protein through breeding?", but it seems appropriate to at least recognize that the answer to this question might be quite different from the answer to the other because many characteristics in addition to oil and protein must be considered in breeding. And the greater the number of characters that must be considered the less the progress will be in any one.

If the number of characters that must be considered in breeding, especially diseases, increases as much during the next 10 years as in the past 10, we will do well if we can simply maintain the progress made thus far. The soybean is coming of age as a crop in the United States and the disease problems have increased in recent years. A soybean variety must produce a reasonable yield in spite of these diseases before we are even interested in its oil and protein contents. Consequently, much of the breeding effort devoted to oil and protein a few

years ago is now devoted to various diseases and the progress in oil and protein will be slowed accordingly.


During the past year the American Soybean Association demonstrated an awareness of the increasing problems in soybean research and we are grateful to it and other groups for the interest they displayed. Research men are always encouraged when individuals most directly concerned with the crop on which they work display an interest in the research problems involved. We hope your interest will continue and we will continue to try to develop better im-

proved, disease-resistant varieties for the future. However, it will be awhile yet before varieties with 25% oil or 50% protein will be available.

## Midwestern Sales

Carlton F. Evans has been named assistant midwestern regional sales manager of International Paper Co.'s Bagpak division, serving as assistant to E. C. Miller. Mr. Evans joined IP in 1949 and has been stationed in Atlanta and Chicago.

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# Needed Research on Soybean Production

By J. W. CALLAND

National Soybean Crop Improvement Council

## WHY DO WE need soybean production research?

Well, some of our most important farm crops such as corn, wheat, and cotton are in serious surplus. This has been costing us billions of dollars in crop payments, storage and disposal costs. This situation has even led to a juvenile kind of thinking on the part of some people who say, "Why not stop crop production research?" which is just about as logical as to stop cancer research to prevent overpopulation of the world.

Maybe it would take 10 years after production research was cut off for crop pests, lack of new improved varieties, and a hundred other things, to reduce crop production to fit our annual needs. Then you and I know it takes another 10 to 15

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years after research is started again before it can result in materially increased crop production. What a mess both our food supply and that of the hungry nations of the world surely would be in before that quarter century was over. I recently heard a speaker say, "Folks who think like that should still be wearing diapers. For instance," he continued, "imagine, if you can, just where you would get the crop scientists when you got ready to turn research on again."

But soybeans are not a surplus crop. Soybeans are our great re-

placement crop. Doubling the acreage of soybeans during the 1950-60 decade alone removed 10 million acres from other crops, most of which are in surplus position. Had it not been for the transfer of these 10 million acres, the surplus problems of corn, wheat, and cotton would be far greater than they are today, and their prices would doubtless be even lower than they are now. Without the 24 million acres used in soybean production, the problems of American agriculture would be far more acute than is true today.

The tremendous increase in soybean production has given U. S. consumers adequate quantities of highly nutritious oil for shortening, margarine, and salad oils at reasonable prices. It has also supplied the protein that has enabled us to produce the livestock and poultry products—meat, milk, and eggs—that make the U. S. consumer the best fed in the world on a lower proportion of income than any other nation at any time. This efficiency in livestock and poultry production has come only through the availability of high quality protein at reasonable prices.

In the period of 12 years export markets have grown from nothing to 142 million bushels from the 1959 crop—and every bushel was exported for dollars. This was one-fourth of our soybean crop. All together, the soybeans, oil and meal exported from our 1959 crop totaled close to \$500 million. No soybeans

are in storage today—all have gone into channels of consumption. This is the crop we need more of.

The use of soybeans and soybean products can be greatly increased both at home and abroad, provided we do not price them out of both domestic and foreign markets.

Jacking up the price of soybeans by short crops, government payments, or other means may do exactly that; destroy markets, turn a large part of the crop over to the government, surplus the crop, and bring on acreage controls—which is something nobody should want. Particularly when there is a much better way to increase the growers' return per acre of soybeans, increase uses, exports, and markets, continue an increasing production and take additional acres out of surplus crops.

This should and can be done by increased production research—raising the average yield 5 to 10 bushels per acre. Increasing yield only 1 bushel will return more than \$60 million annually to growers. A 5-bushel increase, which, I believe, increased research costing not more than \$300,000 a year, could readily bring about within a very few years, would mean some \$300 million increased income to growers on their present acres.

There are few places where the need for increased agricultural research is more apparent than in the area of increased soybean production.

## The Advisory Board

For the past 12 years the advisory board of the National Soybean Crop Improvement Council has been meeting annually in 2-day sessions to consider soybean production problems and research needed to improve both the quality of soybeans and the efficiency of producing them.

The board is composed of representatives of the Land Grant Colleges of Agriculture and Experiment Stations of 22 of the most important soybean producing states, the U. S. Regional Soybean Laboratory, and

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the soybean section of Agricultural Research Service.

These annual meetings have provided the opportunity for each representative to report on all soybean work being done at his institution, and to keep well informed on the production problems of each state and area, as well as the research projects, tests, and experiments being conducted in an attempt to solve these various problems.

The 12th annual meeting held last month was attended by 38 delegates. Incidentally 21 of them brought their wives along. So, you see the distaff side of the house also is vitally interested in these meetings.

The program of these annual meetings is usually confined to some two of the important phases of improved soybean production. This year one complete session was devoted to soybean breeding. The second session was devoted mainly to reports on current research projects dealing with the effect of light on the soybean plant and seed, nodulation research, and the three research projects on the nutrition and physiology of the soybean now in progress at Purdue, Illinois and Iowa State.

Since these were technical papers, the best way I can report to you on

them is to tell you that the Crop Improvement Council mimeographs the proceedings of each annual meeting as an addition to available soybean literature. Bob Judd has been authorized to supply up to 30 copies of the proceedings of the 1961 meeting to those of you who will ask him to mail you a copy.

An outstanding report was delivered at this meeting by Dr. H. A. Borthwick, chief scientist at the USDA's Plant Physiology Pioneer Research Laboratory at Beltsville. His subject was, "The Effect of Light on Plant Growth." Dr. Borthwick traced the history of the research which culminated in the discovery and description of the pigment phytochrome, which is the receptor of light in photoperiodism and in various other plant phenomena.

Phytochrome was determined to be the substance where the activation of biochemical sequences leading to the very diverse manifestations of growth occur. The recognition of phytochrome and its role in plant growth has been heralded as a very definite breakthrough in the science of plant growth, it being the key to growth changes in all plants.

## Needed Research

If the soybean crop is to continue to expand, take more acres out of surplus crops, and provide reasonably priced oil and protein for our increasing livestock and poultry, cheap food for our own people, and supplies for our friends abroad, and at the same time provide a fair return to the farmer, then additional research to improve the efficiency of the soybean plant is imperative. Careful study indicates that increased research in the general areas of (1) weed control, (2) diseases, (3) soybean breeding, (4) physiology and nutrition, and (5) nodulation would be likely to uncover the facts needed to produce soybeans at a definitely lower cost per bushel.

Weed control is the farmer's No. 1 problem in soybean production today. Weeds cost soybean growers \$150 million annually. There are no acceptable chemicals for economically controlling weeds in soybeans. Farmers spend millions of dollars and millions of hours of labor trying to control weeds by cultural operations. In the Agricultural Research Service not a single scientist is devoting full time to the control of weeds in the soybean crop.

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Yet it is generally agreed among those studying the weed problem that the need for finding economical weed control methods is more important for soybeans than for any of the competing crops.

A safe, reasonably priced pre-emerge chemical that would control weeds for the first 3 weeks after planting would enable farmers to plant the soybean crop solid with the grain drill, increase yields, eliminate cultural operations, and materially reduce production costs.

The weedseed content of the soybean crop as harvested and marketed in the United States and in world markets has become a major problem. The possible toxicity of crotalaria seed, jimson weed seed, and morning glory seed has focused further attention on the need for proper weed control as a means of producing a more acceptable product for the soybean market.

This important problem of weed control surely could quickly be resolved by the team approach. Agronomists and plant physiologists with supporting scientific aids, located in the four major areas where the weed problems are different and working exclusively on weed control in soybeans, could be expected to solve the problem in a very few years.

Diseases take an estimated 10% to 15% of the soybean crop. Again this loss totals around \$150 million annually. Effective controls here could add greatly to the efficient production of soybeans.

History indicates that disease problems will increase as the concentration of a crop increases over time. This is certainly true of soybeans. Two of the most serious threats to the crop have come in the past 6 years—the phytophthora root rot and the soybean cyst nematode. Other diseases have likewise in-

creased and annually cause a heavy loss in potential soybean production. Additional research in disease detection, prevention, and control may be the means of preventing disastrous disease epidemics in the future.

Soybean breeding work has developed improved varieties for the various soybean-producing regions. The results have been higher oil and protein content and higher yields through proper maturity, height, resistance to lodging, shattering, and disease, ease of combining, and improved seed quality. In fact, by increasing yields and efficiency of production, this work alone has annually returned to American farmers several hundred times the total amount of all funds the U. S. Department of Agriculture and the state experiment stations have spent on soybean research since the crop was first introduced into this country.

But a tremendous amount of work lies ahead in soybean breeding. Such serious threats as phytophthora rot and the cyst nematode, along with the increasing prevalence of both old and new diseases, mean that all of our soybean varieties must now carry resistance to two, three, or more diseases. This is an immense job that is vitally important to farmers in 26 states. Increased funds for this field of research should pay large dividends.

Physiology and nutrition research on the soybean plant should be greatly expanded. Fertilizer response is practically nil in a major portion of the soybean growing areas. This lack of response to fertilizer is held to be one of the major limits in soybean production. We need to know why this crop produces comparatively better than other crops on poor land but fails to respond satisfactorily to improved fertility and environment. Only fundamental research on the physiology and nu-

trition of the soybean plant will give the answers. Thus research on the basic physiology of the soybean plant appears to be one of the surest ways to increase its efficiency.

The American Soybean Association, the Soybean Crop Improvement Council, and various other soybean groups have repeatedly urged the expansion of research in this area. The oilseeds and peanut research and marketing committee has repeatedly pointed out the need for such research, giving it top priority in their recommendations.

The nutrition and physiology committee of the advisory board considered this phase of soybean research so vital that it has succeeded in raising some \$25,000 annually for a 3-year period to support nutrition research projects started last year at Purdue, Illinois, and Iowa State. The funds are being contributed by the soybean processors and the plant food industry. It is hoped that important leads may be uncovered by these projects, and that this work may encourage the experiment station directors to establish a comprehensive regional project of soybean physiology and nutrition research.

Nodulation research studies are also needed. Large quantities of nitrogen are required to produce high soybean yields. Forty bushels of soybeans contain about 140 pounds of nitrogen, and the vegetative portions of the plant also contain substantial quantities. In view of the general lack of economical response to applied nitrogen and the key role of nodulation in the production of soybeans, research to determine how the production of symbiotic nitrogen for this crop can be improved would seem highly desirable.

Little scientific thought or research is devoted to the nodulation process, which is essential to efficient production in the United States. In spite of the economic importance



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and uniqueness of this process, it is poorly understood and relatively little effort has been devoted to learning its secrets with regard to efficient soybean production. Since nodulation depends completely on the interaction of two distinctly different species—the soybean plant and nodulating bacteria—it seems probable that attention to the genetics of both species would result in great improvement in this process.

### Additional Funds

In January of this year President Houghtlin of the National Soybean Processors Association appointed a committee representing the processors, the growers, the Crop Improvement Council, and the Soybean Council of America to formulate plans and materials for asking Congress for additional soybean research money. Joint briefs were presented by the American Soybean Association and the National Soybean Crop Improvement Council before both the House and Senate committees.

We asked for:

\$100,000 for weed control
110,000 for soybean breeding
75,000 for physiology and nutrition
100,000 for nodulation research

**\$385,000 Total**

The House committee put none of these requests into the House bill. The Senate committee put \$100,000 into its bill. The conference committee of the two Houses compromised on \$35,000 which was added to the House figure of \$265,000 making \$300,000 available to ARS for all soybean research—an increase of \$35,000 over last year.

We feel, however, that our efforts before the committees helped to convince them that they should do definitely more for crop research. As most of you know, Congress did give the experiment stations an additional grant of \$3 million, \$1 million of which was earmarked for weed control research. This money became available July 1, 1961. The experiment stations distributed three-fourths of this \$1 million to the individual state experiment stations and kept one-fourth in a contingency fund for regional projects. Surely here is an opportunity for a regional weed control project on soybeans.

Now you can help by requesting your experiment station director to use some of his share of weed research money specifically for research on weed control in soybeans. This should be done promptly, others

are already asking that it be used on their crops.

Congress also gave ARS a contingency fund of \$1 million above the budget request. This fund is to meet emergencies in crop research and for additional funds needed for particular requests, such as for the soybean crop.

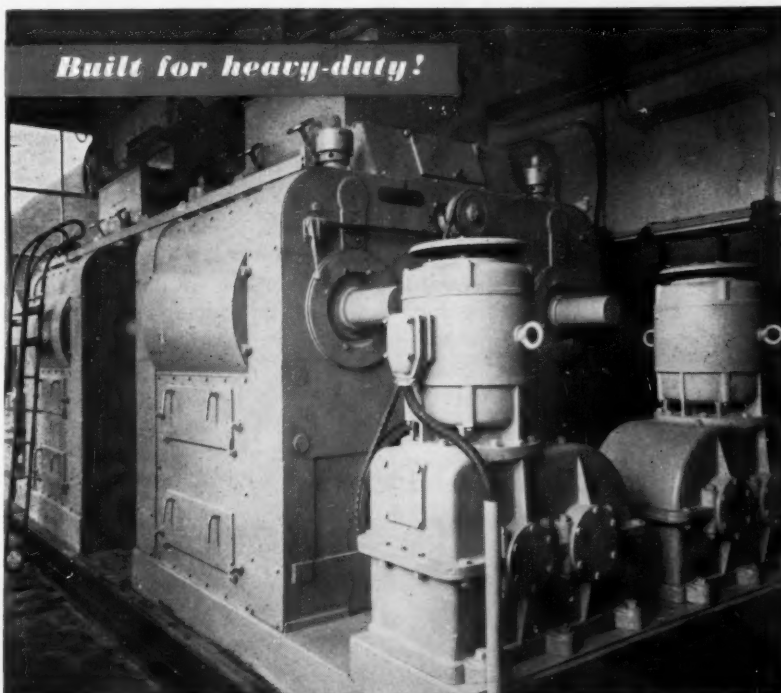
We hope you will also urge ARS to use some of this \$1 million on needed soybean research projects.

All in all, we feel that the cause

of soybean research has definitely been advanced, but only if we keep fighting for it will it get the increase it deserves.

### Honeymead Appoints

Honeymead Products Co., Mankato, Minn., announces the promotion of L. K. Rasmussen to oilseed buyer. He will be in charge of all soybean and flax purchases for the processing facilities at Mankato.



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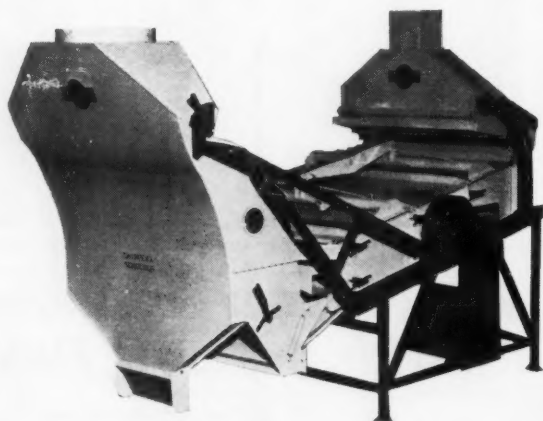
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# Olive Oil Production Up in Greece

**GREECE.** Favorable weather during the early spring growth of the 1961 Greek olive crop has prompted olive oil estimates in excess of 200,000 short tons, according to USDA.

This outturn of oil would be a sharp increase from the 83,000 tons produced from the poor olive crop in 1960, and would exceed the 180,000 of 1957-58. Oil produced from this year's olive crop will be available for use in the 1961-62 marketing season, beginning Nov. 1.

**CANADA.** Canada's soybean crush from January through May totaled 6.3 million bushels, about 7% less than in the same months last year, according to USDA.

However, the crushing of all oilseeds through May was slightly larger than in 1960, the increased volume of flaxseed and other oilseeds offsetting the smaller volume of soybeans.

**WHALE AND SPERM OIL.** World whale oil production in 1961 is forecast at 450,000 short tons, an increase of 6% from 1960. Production of sperm oil is expected to be 130,000 tons, up 8%, according to USDA. The expected increase in whale oil is based on larger output in the Antarctic and a slight increase in other areas, while a larger outturn of sperm oil is forecast mostly for areas outside the Antarctic.

**SUNFLOWER CROP.** World sunflower seed production in calendar year 1960, estimated at 6.9 million short tons, was one-fourth larger than in the previous year, but 4% below the 1958 record, according to USDA. The record output in Argentina and better than average harvest in the USSR were the main factors in the large harvest. These two countries accounted for three-fourths of the world sunflower seed production in 1960.

There was a sharp drop in sunflower seed production in Canada, the only North American country reporting production.

Argentina's 1961 sunflower crop is estimated at 661,400 short tons, down one-fourth from last year.

**U. S. FLAXSEED EXPORTS.** U. S. exports of flaxseed, linseed oil, and linseed cake and meal in the marketing year ending June 30 declined sharply from a year earlier, reflecting increased exportable supplies from other countries, according to USDA.

Flaxseed exports, at almost 7 million bushels, were 1 million less than last year. Linseed oil exports dropped to only 24 million pounds—less than one-half the 1959-60 volume. Exports of linseed cake and meal were down 40% from the previous year, when severe drought in Western Europe necessitated large imports of feed grains.

**WORLD PEANUT CROP.** World production of peanuts in 1960 is estimated at 14.9 million short tons (unshelled basis), 8% larger than the previous year's outturn, but 3% less than the record 15.3 million tons in 1958, reports USDA's Foreign Agricultural Service.

About half of the estimated 1-million-ton increase in 1960 from a year earlier is explained by the increase in India's output. The remainder of the increase is due mainly to larger crops in Nigeria and the area formerly known as French West Africa.

**SWEDEN.** Sweden is expected to increase oilseed imports—probably soybeans—sharply in the current marketing year, says USDA.

The extraction capacity of the only edible oil plant

in the country has been expanded from 100,000 to 200,000 short tons. Imports of vegetable oil and oilcake and meal are expected to decline from the past year's level.

Sweden's consumption of oilcake and meal was an estimated 341,900 tons in the 1960-61 marketing year ending June 30. About 15% of the country's annual cake and meal requirements is obtained from the domestic rapeseed crop, and the balance is imported.

**MEXICO.** Mexico plans to import 22 million pounds of refined cottonseed oil as soon as possible, probably from the United States, according to USDA. This would be equal to purchases made in May and June.

The purchase of additional cottonseed oil should aid Mexico's oil processors, who have complained of small profits they attribute to high oilseed prices while edible oil prices have been controlled at retail.

**VENEZUELA.** Venezuela's 1961 sesame crop totaled a record high 26,700 short tons, according to estimates based on industry crushings thus far this year, says USDA.

The 1960 crop estimate has been revised upward from 15,400 to 19,841 tons. The 1961 crop, planted in the fall of 1960 and harvested early this year, was favored by unseasonably long rainfall.

**NORWAY.** Norwegian production of marine oils continued to trend downward in 1960, and a further decline is forecast for 1961, according to FAS.

In recent years, the output of herring oil from the winter catch has declined sharply—the 1961 catch was the smallest since the near-failure of 1934.

Large stocks of marine oils will partially offset the lower outturn expected in 1961. Nevertheless, imports of fish oils will probably increase sharply to fulfill Norway's trade commitments. Imports from the United States declined sharply in 1960, but they may increase in 1961.

**EXPORT ORDERS.** USDA announced the following purchase authorizations and agreements for U. S. soybean products under Public Law 480 during August:

Aug. 3, an amendment to p. a. 12-27 to Chile, to extend the contracting period to Nov. 30 and the delivery period to Dec. 31, 1961. Provides for purchase of \$3.6 million worth (about 10,400 metric tons) of cottonseed oil or soybean oil from U. S. suppliers. No purchases have been made to date.

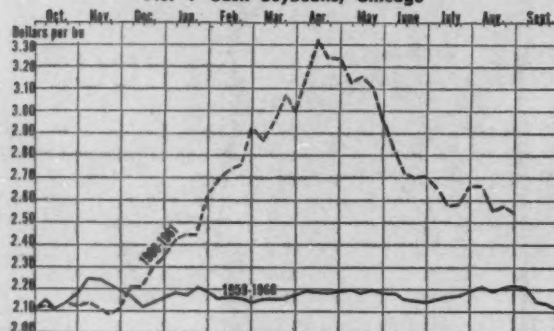
Aug. 11, extension of contracting and delivery dates for p. a. 46-35 to United Arab Republic to Nov. 30 and Dec. 31, 1961. Provides for purchase of \$1.1 million worth (about 3,000 metric tons) of cottonseed or soybean oil. No oil has yet been purchased.

Aug. 14, an amended agreement of Apr. 11, 1960, with Pakistan providing for sale of \$3.15 million worth (about 22 million pounds) of soybean oil or cottonseed oil.

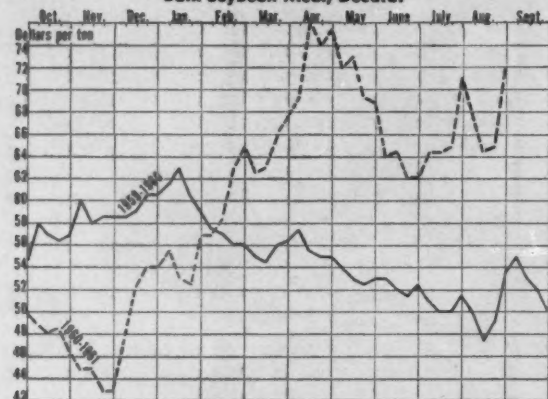
Aug. 17, USDA announced Commodity Credit Corp. had purchased 43 metric tons of hydrogenated vegetable oil (shortening type) for export to Peru under an International Cooperation Administration P. L. 480 (Title II) program. The award was made to E. F. Drew & Co., Boonton, N. J.

Aug. 23, p. a. 37-39 to Republic of China to finance the sale of \$600,000 worth (about 1,800 metric tons) of cottonseed oil or soybean oil under the Food for Peace program, sales contracts between Aug. 30 and Oct. 31, and shipments between Aug. 30 and Nov. 30, 1961.

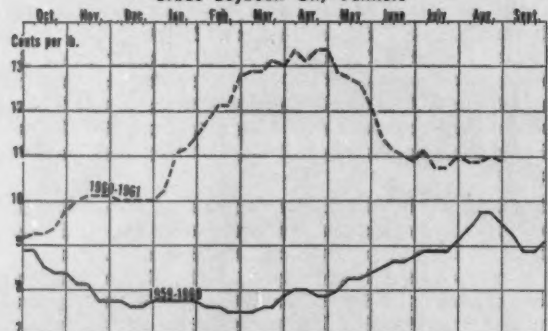
# **TRENDS AT A GLANCE (Weekly Close)** **No. 1 Cash Soybeans, Chicago**



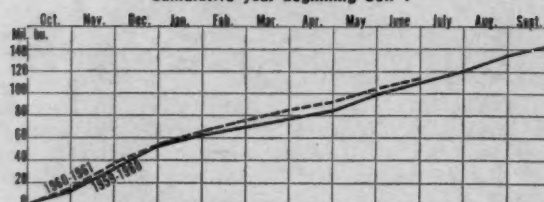
## **Bulk Soybean Meal, Decatur**



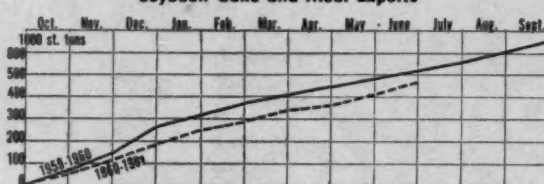
## **Crude Soybean Oil, Tankers**



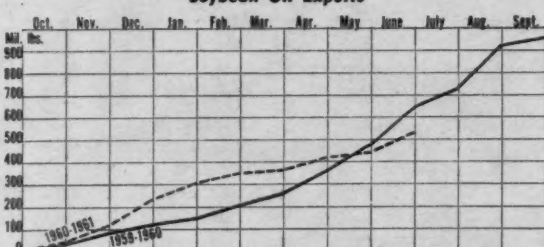
# **Exports 1959-60 AND 1969-61** **Cumulative year beginning Oct. 1**



## **Soybean Cake and Meal Exports**



## **Soybean Oil Exports**



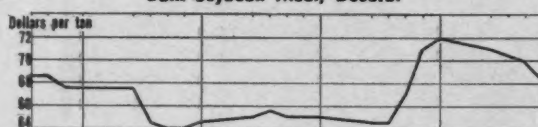
# **1959 AND 1960 SOYBEAN CROPS**

	1960-61	1959-60
Soybeans crushed Oct. 1-July 31 .....	348,560,000 bu.	334,477,000 bu.
Soybeans exported Oct. 1-July 31 .....	119,748,000 bu.	119,202,000 bu.
Balance on Aug. 1 for processing, export or carryover .....	78,679,000 bu.	104,337,000 bu.
Total soybeans inspected for overseas shipment including lake shipments to Canada Oct. 1-Aug. 25 .....	126,472,318 bu.	129,584,869 bu.
Total soybeans placed under support as of July 31 .....	25,617,312 bu.	52,379,385 bu.
Quantity repaid as of July 31 .....	25,253,608 bu.	40,983,964 bu.

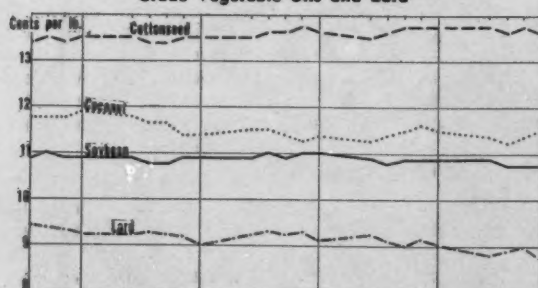
# **DAILY MARKET PRICES** **No. 1 Cash Soybeans, Chicago**



## **Bulk Soybean Meal, Decatur**



## **Crude Vegetable Oils and Lard**



# **CASH PRICES, AUGUST 1961\***

	No. 1 yellow soybeans Chicago	Bulk soybean meal Decatur	Soybean oil Decatur	Cottonseed oil Mississippi Valley	Coconut oil Pacific Coast	Lard Chicago
Aug. 1	\$2.66½	\$68.50	\$10½	\$.13½	\$.11¾	\$.0940
2	2.68½	68.50	.11	.13½	.11¾	.0935
3	2.66	67.50	.10½	.13½	.11¾	.0930
4	2.66¼	67.50	.10½	.13½	.11¾	.0920
7	2.65½	67.50	.10½	.13½	.11¾	.0920
8	2.63	64.50	.10¾	.13½	.11½	.0927
9	2.56¼	64.00	.10¾	.13½	.11½	.0920
10	2.56½	64.00	.10¾	.13½	.11½	.0915
11	2.55¼	64.50	.10¾	.13½	.11½	.0900
14	2.57	65.00	.10¾	.13½	.11½	.0920
15	2.56¼	65.50	.11	.13½	.11½	.0930
16	2.56	65.00	.10¾	.13½	.11½	.0920
17	2.56½	65.00	.11	.13¾	.11¼	.0927
18	2.57½	65.00	.11	.13½	.11¾	.0910
21	2.65½	64.50	.10¾	.13½	.11¼	.0910
22	2.71¼	65.00	.10¾	.13½	.11¾	.0905
23	2.72¾	67.00	.10¾	.13¾	.11½	.0902
24	2.61¾	71.00	.10¾	.13¾	.11½	.0915
25	2.54¾	72.00	.10¾	.13¾	.11½	.0905
28	2.55	71.00	.10¾	.13¾	.11½	.0880
29	2.55	70.50	.10¾	.13¾	.11¼	.0890
30	2.55	70.00	.10¾	.13¾	.11¾	.0900
31	2.55	68.50	.10¾	.13¾	.11½	.0875

\* From Wall Street Journal, Chicago.





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## GRITS and FLAKES . . . from the World of Soy

### Central Soya Announces Changes in Management



W. E. Huge



W. C. Lighter

Central Soya has announced three changes in top management effective Aug. 1.

Wilbert E. "Bill" Huge, vice president, relinquished his duties as head of the chemurgy division to direct Central Soya's progress in the development of markets abroad.

Willard C. Lighter, vice president and director of the Glidden Co., joined Central Soya as vice president in charge of chemurgy division operations, with headquarters in Chicago.

E. E. "Ed" Reynolds, director of marketing for the McMillen feed division, has been named a vice president of Central Soya and will continue his current responsibilities for feed division operations.

Mr. Huge joined Central Soya in 1935. His new duties will include supervision of the company's interest in the recently announced joint venture, Central Soya-Seriom, S. P. A., as well as development of additional ventures abroad in the future.

Mr. Lighter was in charge of the

Glidden Co.'s chemurgy division for several years before it was acquired by Central Soya.

### Woodson Tenent Buys New Orleans Laboratory

Woodson-Tenent Laboratories, Memphis, Tenn., now has eight chemical laboratories, having just purchased the Edward G. Williams Laboratories, New Orleans. The name will be Woodson-Tenent Laboratories Of New Orleans.

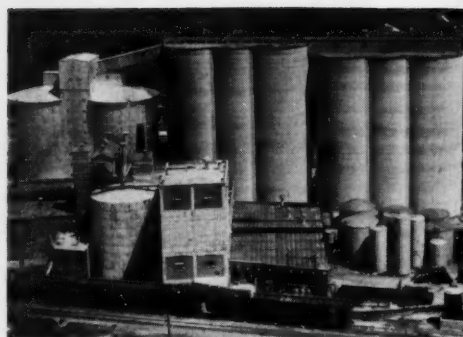
P. C. Thionville is manager. He holds an AOCS referee certificate on oil cake and meal, fatty oils, tallow and grease and protein concentrates. The laboratories serve the cottonseed, soybean, feeds and food industries and all types of agricultural products. The firm started business in 1935 in Memphis, and now have laboratories at Des Moines, Iowa; Chicago, Ill.; Clarksdale, Miss.; Little Rock, Ark.; Wilson, Ark.; and Cairo, Ill.; as well as Memphis and New Orleans.

E. H. Tenent, Sr., is president; E. H. Tenent, Jr., executive vice president; P. F. Woodson, vice president; and Jane Inez Gordon, secretary.

### ADM to Process Soybeans At Fredonia, Kans., Plant

The board of directors of Archer-Daniels-Midland Co. has approved conversion of the company's grain terminal at Fredonia, Kans., to a soybean processing plant.

The new facility will utilize the buildings and concrete storage tanks of the 1-million-bushel terminal



ADM'S FREDONIA, Kans., installation will be converted to a soybean processing plant. Processing equipment will be installed in the buildings in the foreground.

grain elevator. Conversion of the buildings and installation of soybean processing and handling equipment began immediately, with completion scheduled for the fall of 1962.

E. A. Olson, executive vice president of ADM's agricultural group, said the plant will have a capacity of 6 million bushels a year. Mr. Olson said the southeastern Kansas location was selected for the plant because of the increasing production of soybeans in Kansas and neighboring Missouri. The plant will also be favorably located for serving the southwestern livestock and poultry markets with soybean meal.

ADM also operates soybean plants at Mankato, Minn., and Decatur, Ill. The Fredonia plant crushed linseed oil from flaxseed when flax was an important crop in Kansas years ago.



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Kiyotsune Yoshida has been elected president of **Toshoku Ltd.** (formerly Tokyo Food Products), Tokyo, Japan, to succeed Hisatake Chikaraishi, who died suddenly June 3. Mr. Yoshida has been a director of the firm since its establishment and was senior managing director at the time of his election.

The Burrows moisture recorder, revolutionary new moisture tester introduced by **Burrows Equipment Co.** last fall, has received a 1961 master design award from Product Engineering, McGraw-Hill publication. The recorder was one of nine award winners in the national design competition for new products conducted by the magazine.

Ely Balgley has been named director of the **A. E. Staley Manufacturing Co.**'s new market research department. He joins Staley from United Carbon Co. where he was manager of market research.

The promotion of Edwin E. Trimble to manager of its Chattanooga grain department has been announced by **Central Soya**. He joined Central Soya in 1957 and has been assistant manager in the grain department.

### Guy Chipperfield, Seed Crusher President, Dead

GUY CHIPPERFIELD, 67, president of the International Association of Seed Crushers, London, died suddenly July 26.

After serving in France and Belgium with the Royal Fusiliers and the Middlesex Regiment, Mr. Chipperfield joined Lever Bros. Ltd. in



Guy Chipperfield

in Switzerland and then took charge in Hungary until the outbreak of war.

1921 and spent 12 years dealing with overseas and continental companies, mainly on the marketing side. From 1933 to 1937, he managed Unilever's interests

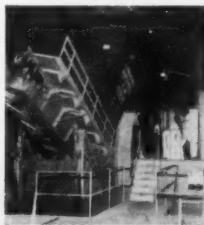
In 1939 he became a member of the Unilever Oil Mills Executive and in 1948, chairman and managing director of British Oil & Cake Mills Ltd.

At the recent Congress of the International Association of Seed Crushers in Stockholm, he was re-elected president for the 11th successive year.

In 1955 Mr. Chipperfield received the honor of commander of the Order of the British Empire, and in 1957 he was appointed a Commander of Merit of the Republic of Italy.



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For full facts, write: Robert H. Jordan, Manager Public Grain Elevator, Board of Commissioners of the Port of New Orleans, 2 Canal Street, New Orleans U. S. A., or Telephone: TWinbrook 7-2321 or JAcson 2-2551.

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# Walker Heads NSPA Board

DONALD B. WALKER, Ralston Purina Co., St. Louis, Mo., was elected chairman of the board of directors of the National Soybean Processors Association, at the annual meeting in Chicago Aug. 3-4. He succeeds Glenn Pogeler, North Iowa Cooperative Processing Association, Mason City, Iowa.

Earl J. Brubaker, Borden Co., New York, N. Y., was elected vice chairman of the board, succeeding Walker.

R. G. Houghtlin, Chicago, Ill., was reelected president. William King Self, Riverside Oil Mill, Marks, Miss., was reelected secretary; and Scott E. Cramer, Swift & Co., Chicago, Ill., was reelected treasurer.

The following directors were elected to serve 3-year terms: Ben R. Barbee, Anderson, Clayton & Co., Abilene, Tex.; R. E. Fiedler, Archer-Daniels-Midland Co., Minneapolis, Minn.; W. E. Flumerfelt, General Mills, Inc., Minneapolis; W. E. Hoge, Central Soya Co., Fort Wayne, Ind.; Harris T. Lyon, Allied Mills, Inc., Chicago; Donald C. Ogg, Iowa Soya Co., Redfield, Iowa.

Floyd E. Hiegel, Delphos Grain & Soya Products Co., Delphos, Ohio; and M. D. McVay, Cargill, Inc., Minneapolis, Minn., were elected to fill the unexpired terms of Mr. Brubaker and Ralph S. Moore, Soy-Rich Products, Inc., Wichita, Kans.

Holdover directors are: R. E. Alexander, Pillsbury Co., Minneapolis; L. W. Andreas, Honeymead Products Co., Mankato, Minn.; A. M. Convis, Funk Bros. Seed Co., Bloomington, Ill.; Dwight L. Dannen, Dannen Mills, Inc., St. Joseph, Mo.; R. G. Golseth, Lauhoff Soya Co., Danville, Ill.; R. B. Jude, Spencer Kellogg & Sons, Inc., Buffalo, N. Y.; A. I. Reisz, Ohio Valley Soybean Cooperative, Henderson, Ky.; E. E. Rhodes, A. E. Staley Manufacturing Co., Decatur, Ill.; Irving Rosen, Quincy Soybean Products Co., Quincy, Ill.; R. B. Williams, Buckeye Cellulose Corp., Cincinnati, Ohio.

Fiedler and Lyon were elected to 2-year terms on the executive committee. Barbee and McVay were elected to the executive committee to fill the unexpired terms of Brubaker and Moore.

John Terral, Terral-Norris Seed Co., Lake Providence, La., was reelected president; E. D. Barrett, Soybean Storage & Elevator Co., Hornersville, Mo., vice president; and Paul C. Hughes, Farmers Soybean Corp., Blytheville, Ark., secretary.

Elected directors for 3-year terms: R. A. Fisher, Gibbs-Harris Rice Drier, Wynne, Ark.; J. G. Washom, Jr., St. Francis Valley Grain Co., Marked Tree, Ark.; Harold Lumsden, Essex Grain Co., Essex, Mo.; R. W. Ferrell, Sojamax Elevator, Blanton, Miss.; James Ozment, Farmers Soybean & Storage Co., Dyersburg, Tenn.

Jerry Bogard, Bogard Grain & Seed Co., Inc., Stuttgart, Ark., was elected for a 2-year term replacing M. L. Lockhart of Augusta who resigned.

"The Future of Our Competitive Grain Market" was the theme of the convention.

## USDA Announces Sales Price on Takeover Beans

THE U. S. DEPARTMENT of Agriculture has announced a preliminary minimum sales price for any soybeans it may acquire next summer from the 1961 crop. The purpose of the announced minimum is to help maintain market prices at not less than support level during the heavy marketing season this fall.

The minimum price is the county support rate for No. 2 soybeans plus 16½¢ per bushel. The 16½¢ markup is arrived at by adding 5% of the national average support rate of \$2.30 per bushel and in-elevation charges of 5¢ per bushel.

The announcement will permit producers and the trade to conduct normal marketing operations with knowledge of CCC pricing objectives.

## Midsouth Shippers Meet

A RESOLUTION asking the extension service, the Southern Seed Men and Southern Seed Control Officials to place crotalaria on the list of noxious weed seeds and "make an all out effort to acquaint all branches of the trade with this seed and the dangers the soybean trade faces," was adopted by the Midsouth Soybean and Grain Shippers Association at the 8th annual convention in Memphis Aug. 1-2. The Association also asked state ASC offices to re-

move crotalaria from the list of cover crop seeds on which soil practice payments are made.

The Association pledged itself to continue to work toward a uniform standard of grades and discounts acceptable to all branches of the soybean trade; and went on record as opposed to a recent ruling of USDA regarding the loan program on soybeans which it called "discriminatory against a majority of the members of this Association."

## IOWA MILLING COMPANY

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# Crop Outlook Excellent

REPORTS WERE almost universal that the condition of the soybean crop improved during August and added to an already bumper prospect. This was a reversal of the usual report for August, when the crop condition generally declines in some part of the soybean belt. There were a few dry spots but not many.

When the Soybean Digest went to press in late August it appeared that there would be no early movement of the crop, barring a hot, dry spell.

Weeds were bad in some areas.

USDA forecast a 1961 soybean production of 683 million bushels as of Aug. 1. This would be the largest crop of record, 22% above last year, and 124 million bushels more than in 1960. The per-acre yield of 25.2 bushels compares with 23.6 bushels last year.

Reports from Soybean Digest correspondents:

**Arkansas.** Paul C. Hughes, Farmers Soybean Corp., Blytheville (8-21): Crop condition 110%-115% of normal. Weather perfect to date. Yield outlook 27-28 bushels per acre, total may be 1% to 2% larger than last year. Farmer doesn't seem concerned about selling any of his crop. In spite of 124-million-bushel increase (nationally) doesn't feel \$2.25-\$2.30 enough for beans."

**Delaware.** H. W. Crittenden, W. A. Connell and R. H. Cole, University of Delaware, Newark, reported after a survey of state Aug. 7 condition of crop varied from excellent to poor, with two very dry strips through the state. Their general impressions: Insect infestations were not as great as last year, but there was a heavy infestation of downy mildew with the Hood variety extremely susceptible. There was a trend toward later varieties with many improperly used, being planted late and after small grain. Weed control was definitely superior to last year. Row widths were extremely wide, 38 to 42 inches, in late plantings.

**Illinois.** Hubert W. Baker, Dalton City (8-20): We have had above normal rainfall and below normal temperature. All fields were well podded. I think the yield will be about 10% better than last year. Crop movement will begin late September, later than 1960.

**Indiana.** Ersel Walley, Walley Agricultural Service, Fort Wayne (8-21): Crop is not made although prospect is unusually bright. Stem

and foliage growth more luxuriant than ever. Need less rain and more sunshine. Worry now: How will they fill? Early pods have only two beans.

**Minnesota.** John W. Evans, Montevideo (8-21): Could use warmer weather. Signs of fall appearing. Crop condition good. Rains uneven. Some areas retarded. Fields did look clean. Now showing weeds. Crop movement will begin Oct. 1.

**Missouri.** Jim Pitts, St. Joseph (8-21): Crop condition well above normal except in hail areas. August cooler and more moisture than normal. Crop movement will begin around Sept. 15-20, about normal.

**Nebraska.** C. W. Holmquist, Holmquist Grain & Lumber Co., Oakland (8-19): Crop condition 95%. Moisture conditions ideal with exception of extreme northern Nebraska. Most fields look real clean. Some farmers are providing storage but if the market is not depressed too much we believe the greater percentage will move to market.

**Ohio.** Calvin Heilman, Kenton (8-21): Crop 10 days late. Needs 35 or 40 days without killing frost. Condition excellent. Perhaps a little too much moisture. Harvest will begin Oct. 1, week or 10 days later than 1960.

**Virginia.** Louis Groh, Louis Groh & Son, Inc., Clay Bank (8-19): Crop condition very good. Need moisture

very much. Crop movement will begin about Oct. 20, same as last year.

**Ontario.** R. H. Peck, River Canard (8-21): Crop condition very good. Should be above average yield. Many fields looking weedy. Will not hurt crop much but may add to combining troubles. 15% increase in yield. 10% increase in acreage. Storage may be tight if too much sold direct from combine.

SOYBEANS FOR BEANS CROP PRODUCTION, AUGUST 1961									
Crop Reporting Board, SRS, USDA					Production				
Yield per acre		Production		Yield per acre		Production		Yield per acre	
Average	Indi-	1950-	cated	Average	Indi-	1950-	cated	Average	Indi-
1950-	1961	1950-	1961	1950-	1961	1950-	1961	1950-	1961
Bush-	Bush-	Bush-	Bush-	Bush-	Bush-	Bush-	Bush-	Bush-	Bush-
els	els	els	els	els	els	els	els	els	els
N. Y.	16.4	17.0	17.0	90	51	34			
N. J.	20.4	24.5	25.0	615	808	775			
Pa.	18.4	23.0	24.0	316	161	144			
Ohio	23.2	25.0	26.0	28,153	37,850	44,096			
Ind.	23.6	27.0	28.0	46,838	65,205	79,548			
Ill.	24.6	26.0	28.5	107,187	129,298	156,978			
Mich.	21.2	21.0	24.0	3,662	4,641	6,048			
Wis.	15.4	16.0	19.0	1,139	1,536	2,204			
Minn.	19.2	20.0	22.0	37,543	41,800	51,040			
Iowa	23.5	26.0	27.5	51,965	67,574	96,745			
Mo.	19.6	21.5	24.0	34,995	50,396	60,624			
N. Dak.	13.8	13.0	15.0	1,517	2,288	3,030			
S. Dak.	14.2	17.0	16.0	2,072	1,700	1,984			
Nebr.	21.3	28.0	24.0	2,749	4,172	6,000			
Kans.	13.1	22.0	22.0	5,295	12,892	15,444			
Del.	18.8	24.0	24.0	2,105	4,536	4,896			
Md.	20.4	26.0	26.0	2,949	5,850	6,916			
Va.	18.6	22.5	22.0	4,036	7,200	7,744			
N. C.	18.4	22.5	23.0	6,556	11,902	13,708			
S. C.	13.1	19.5	20.0	3,147	9,730	11,180			
Ga.	12.3	17.0	16.0	645	1,275	1,216			
Fla.	20.4	26.0	24.0	523	780	864			
Ky.	18.8	22.0	23.0	2,615	4,378	4,623			
Tenn.	19.0	22.0	23.0	4,650	8,668	9,545			
Ala.	19.5	24.0	24.0	1,982	3,192	3,648			
Miss.	17.3	22.5	24.0	10,704	20,610	26,208			
Ark.	18.4	21.0	22.0	24,003	50,589	56,716			
La.	19.0	24.0	24.0	1,980	5,184	5,952			
Okla.	13.1	20.0	20.0	682	2,480	2,900			
Texas	12.1	24.0	27.0	446	2,025	2,322			
U. S.	21.4	23.6	25.2	391,162	558,771	683,132			

<sup>1</sup> Short-time average.

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44% Protein Solvent Extracted Soybean Meal  
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We are in position to load out Soybean Meal in truck and carload lots—both in bulk and sacked in 100-Lb. bags.

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## NEW PRODUCTS and SERVICES

**GRAIN PROBE.** A vacuum-powered pneumatic probe that uses airpower to penetrate and take samples from stored grain has been introduced by Cargill, Inc.

The unit, called "Probe-A-Vac," is said to as much as double the speed and increase the accuracy with which large piles of grain can be sampled, inspected and treated.



"The advent in recent years of larger storage units for grain has made grain inspection more difficult," said F. M. Parkinson, Cargill special products manager.

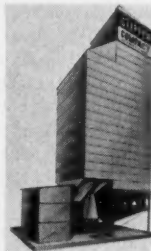
The unit uses air circulation through a tube-within-a-tube and special pointed nozzle to "eat through" a pile of grain, Parkinson says.

For further information write Soybean Digest 9f, Hudson, Iowa.

**COMPACT DRIER.** The addition of a new continuous flow drier has been announced by Eldon L. Taylor, president of A. T. Ferrell & Co., in a move to extend the company's drier line. The Clipper Genie Compact Continuous Flow Grain Dryer is guaranteed to deliver full rated capacity.

The continuous flow principle, as utilized by the Compact model, is claimed by A. T. Ferrell & Co. engineers to be far more efficient than any other method of commercial grain drying. Major features of the new compact drier are identical to the larger Clipper Randolph grain drier, with the Clipper Genie using the basic principles of grain drying, which are a uniform flow of grain and uniform application of air and heat. In addition, identical heavy gauge steel construction, as in the regular Clipper Randolph driers, has been used in the manufacture of its smaller counterpart.

For complete information write Soybean Digest 9d, Hudson, Iowa.



**STORAGE BIN.** Black, Sivalls & Bryson, Inc., has announced availability of two new king-sized bins—48 ft. by 40 ft. 66,850-bushel capacity and 48 ft. by 24 ft. 42,450-bushel capacity.



The manufacturer says the new size marks a breakthrough in stiffened corrugated structures that reduces the storage cost per bushel to an alltime low. The addition of these two new super-sized bins provides a selection range from 5,389 bushels to 66,850 bushels.

For literature write Soybean Digest 9b, Hudson, Iowa.

**SOLVENTS.** "Behind the Compass" is the title of a new brochure being distributed by American Mineral Spirits Co.

It is a pictorial presentation of Amsco's people, refineries and plants. Featured is a map of the country showing the location of the sales offices and distribution network of this national marketer of petroleum solvents, technical naphthas, petrochemicals and waxes.

For a copy of the folder write Soybean Digest 9a, Hudson, Iowa.





## Where are the grain markets of the future?

They could be in the country symbolized by this photo. They could be in the burgeoning nations of Africa. Or they could very well be right here at home, thanks to anticipated population increases.

The markets of the future are being explored right now by Continental. We are keeping close check on internal developments in virtually every country of the

world. A vast, world-wide communications network helps us keep abreast of the goings-on that affect our business and yours. When markets are ready for us, we'll be ready for them.

Look to Continental Grain Company to serve existing markets, here and abroad. And depend on Continental to find and develop new markets to assure you a

steady, reliable, profitable outlet for your grain . . . here, there, everywhere!

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**CONTINENTAL GRAIN COMPANY,**  
*Helping American Agriculture serve the nation and the world*

# Bear Talk Discounted

WHERE DO WE GO from here? With the omnibus farm law on the books, what is the Administration going to do farmwise next? Based on talks with officials, we believe we can give you some pointers.

First to remember—the new farm laws reverse Benson-Farm Bureau policies. Get this set in your thinking and the whys and wherefores of present and coming changes will fall into place. To boil it down, the new trend is perhaps best illustrated in the price supported commodities—higher supports for all and controls to hold down production.

Soybeans are the notable exception. Higher supports for them were in the cards anyway under the new philosophy, but the final higher level set was determined to produce a precalculated production increase of a particular size.

## "Supply Management"

Secretary of Agriculture Freeman regards the new changes as a foot in the door for "supply management" theories of farm production. Cited as additional support for Freeman claims are new marketing orders for additional crops, all-producer farmer committees and a Congressional go-ahead to further the power of co-operatives.

The upshot: Freeman tells us he is going right ahead in the same direction. He may try to go a bit slower, since he admits he learned a little something from Congress this session. But he also adds, "I think Congress learned something, too (about agriculture)."

Disregard the bearish talk trying to get off the ground that the United States can't use in 1 year the roughly 690-million-bushel supply of soybeans we are expected to have for 1961 after all factors have been considered.

First, it's confusing if bearish talk implies we won't know what to do with the big crop coming up. Prices shot up sky high the latter part of the outgoing season, yet we still have a few million bushels of beans left as carryover.

The "oversupply" type of rumor overlooks the fact that a reasonable carryover or buildup of stocks is necessary for a good start of the following season. There is room for argument over this, of course, depending on whether you are grower, processor, exporter, or government.

USDA is plainly unimpressed by the concern some are trying to whip up over possibly depressing prospects as a result of the record crops.

Officials are likewise shrugging off rumors or suggestions that it might be desirable to announce a 100-million-bushel carryover of the new crop. A carryover of this size would reduce supplies too close to last year's with the same risk of endangering exports by too high prices.

Others see a close connection between the talk of a 100-million carryover and rumors that an oil export subsidy might be in the works. Too high prices for beans and accordingly oil, brought on by a government drive for a high carryover, might indeed call for an export subsidy.

USDA is pinning its detachment from all the turmoil over a big sup-



By **GEORGE PETER**

Washington correspondent for the Soybean Digest

ply on the estimate that the overall increase in supply of edible fats, oils and oilseeds will be about 10% compared to last year. This reduces the tendency to overexcitement to better perspective.

## Earliest Prospects

While USDA won't make its first fully detailed report on the prospects until the October Outlook issue of the Fats and Oils Situation, we have been studying the statistics and talking to officials. We think it is possible to try looking at the situation a little earlier. Here are some of the highlights:

**Supplies:** 688 million to 690 million bushels or slightly over.

**Exports:** 175 million bushels in beans, up about 40 million bushels over last season.

**Domestic crush:** 435 million bushels.

**Seed, feed and loss:** about 40 million bushels.

**Carryover:** about 40 million bushels. This is only about a month's requirement for crushings and export. All else is record in this year's figuring and a carryover of this size wouldn't be burdensome. Carryover in 1960 was 23 million bushels; in 1959 about 62 million.

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44% Soybean Meal

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**KANSAS SOYA PRODUCTS CO., INC.**  
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LANGSTON BAG CO. OF MISS., Inc. — Jackson, Mississippi  
LANGSTON BAG CO., Inc. of Puerto Rico — Fajardo, P.R.  
Cable: "Lanbagco" — San Juan

**Under loan:** At this stage, we see about 150 million bushels under loan. They may be redeemed to an extent but the government will get some.

The important "if"—whether to sell or hold and to what extent may alter the volume under loan considerably. Some are already advising farmers to sell early if prices are at or around support. But against this, many will remember that those who rushed out and sold the past season lost the chance to cash in on the big price rise later. About one-half the crop was sold for less than \$2 by the farmer by January. Prices later topped \$3.

Another factor that may affect this year's CCC holdings is the new pricing policy. As USDA figures, there will be no fire sale of beans come next summer. No. 2 beans taken over by CCC will get 16½¢ above support on sale.

### USDA General Outlook

In the meantime, USDA gives us some cues on the general outlook for oilseeds, fats, and oils in its latest report on the Demand and Price Situation. All prospects are bullish and record, pending more detailed estimates later in the season.

Supplies of edible fats, oils, and oilseeds will set a new record in the 1961-62 marketing year beginning Oct. 1, 1961, based on September estimates. They are expected to exceed the current year's 13.9 billion pounds (oil equivalent of oilseeds) by about 1.3 billion pounds or 10%. The increase in supply is due almost entirely to the huge 1961 soybean crop in prospect, although lard supplies will be up slightly from a year earlier.

Domestic disappearance of food fats probably will continue to rise in 1961-62 about in line with the population increase. However, since the population increase will require only about 10% of the increase in supply, this indicates that the quantities of edible vegetable oils (cottonseed and soybean), lard, and soybeans available for export in 1961-62 would be up sharply from the 3.4 billion pounds expected to be shipped abroad for the marketing year just ending.

The export outlook for food fats and oils in the 1961-62 marketing year is bright, as sales for dollars plus a large P. L. 480 program for edible oils are expected to result in a peak outward movement. It appears that growing foreign demand probably will absorb a good portion of the increased 1961-62 output of U. S. fats and oils, but a sizable

buildup in our year-end stocks on Sept. 30, 1962, likely will occur mainly in the form of soybeans.

U. S. supplies of soybeans during

the marketing year commencing Oct. 1, 1961, are estimated at about 690 million bushels, up 105 million bushels from the previous year.

## — MARKET STREET —

We invite the readers of THE SOYBEAN DIGEST to use MARKET STREET for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here. Rate 10¢ per word per issue. Minimum insertion \$2.00.

**STEEL STORAGE TANKS:** 10—30' DIA. X 30', 160,000 gals.; 2—28' dia. x 19'6", 90,000 gals.; 2—24' dia. x 20', 67,500 gals.; 7—18' dia. x 30', 55,000 gals.; 4—15'6" dia. x 16'1", 22,500 gals. H. Loeb & Son, 4643 Lancaster Ave., Philadelphia 31, Pa.

**WANTED: CHEMICAL ENGINEER.** Opportunity for a man having a B.S. degree with major in chemical engineering, and from 2 to 5 years experience in industry. Work involves engineering studies and improvements on existing and new processes for wide range of soybean products. Opening with large, diversified soybean processor. Address Box 158C, the Soybean Digest, Hudson, Iowa.

**PRATER 75 H.P. DUAL SCREEN PULVERIZER.** Also 100-lb. Richardson meal scale and Union Special 12-inch belt sewing machine. Ray L. Jones, 1923 Hayselton Drive, Jefferson City, Mo.

**MISSISSIPPI CERTIFIED GULFROSE** seed rice. Come see. Order seed early. Bard Selden, Tunica, Miss.

**FOR SALE—ANDERSON EXPELLERS** and French screw presses, cookers, drivers, 5-high, 48-inch crushing rolls, 36-inch attrition mills, sewing machines, hammermills, cracking rolls, filter presses. Ray L. Jones, 1923 Hayselton Drive, Jefferson City, Mo.

**WE MANUFACTURE STEEL ELEVATOR** legs, screw conveyors, pit screws, valves, elbows, piping, collectors, enclosed distributors, etc. Write for catalog and prices. Creamer Sheet Metal Products, London, Ohio.

**PRODUCING ONE VARIETY OF MISSISSIPPI** certified Rebel soybean. Come see or order seed early. Bard Selden, Tunica, Miss.

**CHAROLAIS BULLS. COME SEE THEM** or write Bard Selden, Tunica, Miss.

**SEWING MACHINES—ALL TYPES** conveyors, swinging units, portables. New and used. Fischbein, Union Special, Minneapolis. Complete rebuilding and service. McCullough & Co., 8205 Paradise Lane, Kansas City 34, Mo., South 1-2857.

## ATTENTION

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Hudson, Iowa

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GRAIN ELEVATORS

STORAGE ANNEXES

MILL BUILDINGS



HOUSTON                      MARRERO (New Orleans)  
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### Consulting Engineer to the Soybean Industry



Balance on Aug. 1 for processing, export, or carryover .....	78,679	104,337	131,057	86,349
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<sup>1</sup> Imports not included because negligible. <sup>2</sup> No allowance is made for new-crop crushings prior to Oct. 1. <sup>3</sup> Estimated.

# PROCESSING OPERATIONS. Reported by Bureau of the Census for June and July 1961.

Primary products except crude oil at crude oil mill locations: Production, shipments and transfers, and stock, July 1961-June 1961 (1,000 short tons)

	Production		Shipments and transfers		Stocks end of month	
	July 1961	June 1961	July 1961	June 1961	July 31, 1961	June 30, 1961
Soybean:						
Cake and meal .....	716.8	734.7	710.5	751.9	201.6	195.3
Millfeed (hull meal) .....	15.3	14.8	14.9	16.5	9.1	8.7

Soybeans: Net receipts, crushings, and stocks at oil mills, by states, July 1961-June 1961 (1,000 short tons)

	Net receipts at mills <sup>1</sup>		Crushed or used		Stocks at mills	
	July 1961	June 1961	July 1961	June 1961	July 31, 1961	June 30, 1961
U. S. ....	424.0	424.7	929.1	955.6	987.9	1,493.0
Arkansas .....	(2)	(2)	(2)	(2)	(2)	(2)
Illinois .....	145.9	163.8	284.7	273.1	212.7	351.5
Indiana .....	36.6	41.9	92.0	97.0	83.6	139.0
Iowa .....	91.1	98.6	153.1	145.8	149.5	211.5
Minnesota .....	47.0	47.2	63.9	64.0	74.9	91.8
Mississippi .....	0.1	0.9	11.0	28.7	4.4	15.3
Missouri .....	(2)	(2)	(2)	(2)	(2)	(2)
Nebraska .....	(2)	(2)	(2)	(2)	(2)	(2)
North Carolina .....	(3)	(3)	(2)	11.5	28.4	40.4
Ohio .....	44.1	50.3	77.0	74.7	112.0	144.9
Tennessee .....	22.7	13.5	76.7	82.0	114.0	168.1
All other .....	36.5	8.5	170.7	178.8	208.4	330.5

Note: Detail figures may not add to totals because of independent rounding. <sup>1</sup> Net receipts for each state are derived from the quantity of beans crushed and net change in stocks. <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies. <sup>3</sup> Receipts exceeded by reshipments out of previously acquired stocks.

Soybean products: Production and stocks at oil mill locations, by states, July 1961-June 1961

	Crude oil (millions of pounds)				Cake and meal (thousands of tons) <sup>1</sup>			
	Production		Stocks		Production		Stocks	
	July 1961	June 1961	July 31, 1961	June 30, 1961	July 1961	June 1961	July 31, 1961	June 30, 1961
U. S. ....	345.1	352.8	127.4	*133.6	732.1	749.5	210.7	204.0
Arkansas .....	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Illinois .....	108.1	103.5	45.5	42.3	217.8	209.6	56.8	60.1
Indiana .....	33.8	35.3	(2)	*11.4	74.0	77.1	(2)	(2)
Iowa .....	55.7	52.7	18.9	13.8	123.1	117.8	37.9	32.6
Minnesota .....	22.9	23.3	9.1	7.5	50.0	49.2	4.7	3.3
Mississippi .....	5.7	11.1	(2)	8.0	11.3	23.2	3.8	7.0
Missouri .....	(2)	(2)	2.7	2.9	(2)	(2)	(2)	4.1
Nebraska .....	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
N. Carolina .....	(2)	4.0	(2)	2.4	(2)	9.2	(2)	1.9
Ohio .....	28.2	27.0	7.1	9.4	62.4	59.2	7.8	3.8
Tennessee .....	28.4	30.8	6.6	11.9	59.7	63.8	7.5	5.7
All other .....	62.3	65.1	37.5	24.0	133.8	140.4	92.2	85.5

\* Revised. Note: Detail figures may not add to totals because of independent rounding. <sup>1</sup> Includes mill feed (hull meal). <sup>2</sup> Included in "All other" to avoid disclosure of figures for individual companies.

## FACTORY USE VEGETABLE OILS for May and June 1961. Reported by Bureau of the Census.

Selected edible oils: Production, consumption, and factory and warehouse stocks June 1961 and May 1961 (million lbs.)

	Cottonseed oil		Soybean oil	
	June 1961	May 1961	June 1961	May 1961
Production:				
Crude oils .....	60.4	100.8	352.8	377.0
Refined oils (once refined) <sup>1</sup> .....	80.0	118.6	270.2	313.3
Consumption in refining <sup>1</sup> .....	86.5	128.4	281.9	324.7
Consumption in selected edible and inedible products, total <sup>2</sup> .....	102.5	108.6	266.5	289.5
Consumption in edible products, total .....	102.1	108.0	248.6	271.7
Baking or frying fats .....	27.0	28.4	80.5	90.0
Salad or cooking oil .....	64.4	68.7	83.3	92.8
Margarine .....	9.7	10.0	82.4	87.3
Other edible products <sup>3</sup> .....	1.0	0.9	2.4	1.6
Stocks, end of month, total <sup>2</sup> .....	313.1	379.1	769.1	*710.0
Crude oils .....	43.3	66.5	528.5	*474.5
Refined oils .....	269.8	312.6	240.6	235.5

\* Revised. <sup>1</sup> Production of refined oils covers only once-refined oil. Degummed soybean oil is reported as crude oil. <sup>2</sup> Includes hydrogenated fats (vegetable) and other fats and oils "in process," (e.g. refined cottonseed includes stocks of stearin). <sup>3</sup> Includes confectioners' fats.

Consumption of vegetable oil foots in fatty acids (million lbs.)

Total consumption <sup>1</sup>		Used in fatty acids		Percent used in fatty acids	
Cum.:		Cum.:		Cum.:	
June 1961	Jan.-June 1961	June 1961	Jan.-June 1961	June 1961	Jan.-June 1961
13.6	11.9	68.0	66.9	8.9	7.1
40.6	40.6	65%	60%	60%	61%

<sup>1</sup> Excluding amounts consumed in refining. U. S. Bureau of the Census.

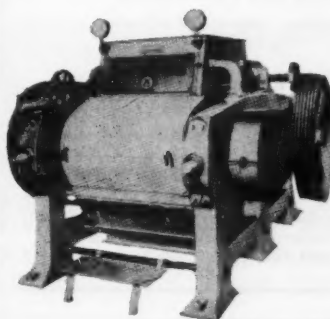


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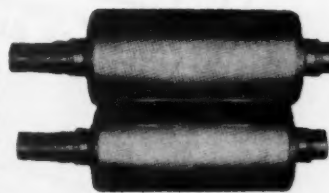
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U. S. soybeans in store and afloat at domestic markets

	Aug. 1	Aug. 8	Aug. 15	Aug. 22
Baltimore .....	334	327	341	369
Chicago .....	6,067	5,681	5,157	3,573
Afloat .....	0	0	0	58
Duluth-Superior .....	438	436	297	142
Indianapolis .....	52	40	2	2
Kansas City .....	477	389	227	227
Minneapolis .....	104	74	34	1
New Orleans .....	1,214	1,197	839	801
Afloat .....	1,240	960	400	520
Peoria .....	1	1	1	1
Philadelphia .....	91	91	93	62
Sioux City .....	654	614	573	516
St. Louis .....	408	256	228	179
Toledo .....	543	406	171	181
Visible supply .....	11,623	10,472	8,363	6,632
Grand totals .....				
This week .....	11,623	10,472	8,363	6,632
Year ago .....	13,315	13,796	11,699	11,079
Total Chicago soybean stocks .....	6,067	5,681	5,157	3,631

**MELLORINE.** Production of mellorine and other frozen desserts made with fats and oils other than milk-fat in the United States was estimated at 5,285,000 gallons in July. This was 8% more than in July 1960 and 22% greater than the 1955-59 average for the month. Total production the first 7 months of this year was 9% larger than in the January-July months of 1960.

Production of "mellorine-type" frozen desserts, United States 1961

	1955-59 average <sup>1</sup>	1959 <sup>1</sup>	1960 <sup>1</sup>	Estimated 1961	Change from: 1955-59 av. 1960
	Thousand gallons				Percent
January .....	2,012	2,254	2,536	2,850	+42 +12
February .....	2,188	2,444	2,912	3,100	+42 +6
March .....	2,805	3,338	3,452	4,140	+48 +20
April .....	3,076	3,601	3,824	4,055	+32 +6
May .....	3,723	4,146	4,343	4,985	+34 +15
June .....	4,026	4,825	5,329	5,390	+34 +1
July .....	4,324	5,007	4,911	5,285	+22 +8
7-month total .....	22,154	25,615	27,307	29,805	+35 +9

<sup>1</sup> From enumerations.

**INSPECTIONS.** Inspected soybean receipts, by grades and percent, reported by Agricultural Marketing Service.<sup>1</sup>

Grade	July 1961 <sup>2</sup>		June 1961		July 1960		Oct. 1960- July 1961		Oct. 1959- July 1960	
	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.	1,000 bu.	Pct.
No. 1 .....	2,105	18	3,127	24	5,832	25	99,057	25	70,527	19
No. 2 .....	6,436	57	6,226	49	13,068	56	181,320	47	190,013	51
No. 3 .....	2,037	18	2,171	17	2,932	13	73,743	19	76,939	21
No. 4 .....	602	5	864	7	1,012	4	26,745	7	21,934	6
Sample .....	202	2	361	3	346	2	8,539	2	9,802	3
Total .....	11,382	100	12,749	100	23,190	100	389,404	100	369,215	100

<sup>1</sup> Carlot receipts have been converted to bushels on the basis that 1 carlot equals 1,800 bushels. <sup>2</sup> Of the July receipts, 400 bushels were brown and the remainder yellow soybeans. Inspections of soybeans in July included 3,825,000 bushels as cargo lots, 677,330 bushels as truck receipts, and the balance as carlot receipts. Based on reports of inspections by licensed inspectors at all markets.

**PRICES.** Average price for soybeans received by farmers, effective parity, and support rates, reported by Agricultural Marketing Service (dollars per bushel).

Average farm price				Effective parity	Average price as percent of parity	National average price support rate		
July 15, 1961	June 15, 1961	July 15, 1960	July 15, 1961	July 15, 1961	July 15, 1961	1961 crop	1960 crop	1959 crop
2.48	2.60	1.97	2.88	86	2.30	1.85	1.85	

Average farm and parity prices from crop reporting board.

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